Strategy Affordability **Delivering the Healthcare for London**

Back up materials - June 2009

Updated November 2009

時間にに応知法の説明

Disclaimer

The productivity improvement and cost reduction cases described in this document are examples for each PCT, Trust or other health body to explore according to their local context and situation

In no case does this documents reflect a set of imposed directions/actions which the SHA is "telling you to take"

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Miscellaneous

HfL identified a number of areas where the current healthcare system could be improved

- 1. Health and healthcare are not as good as they could be in London
- 2. As a result, the NHS is not meeting Londoners' expectations
- 3. Across London there are big inequalities in care
- 4. There are opportunities to explore different delivery models, i.e., the hospital is not always the answer
- 5. There is a need for concentrating specialised care
- 6. London should be at the cutting edge of medicine
- 7. The existing workforce and estate are not being used effectively
- 8. There is an obligation to make the best use of taxpayers' money

health and healthcare services in London The final report – A Framework for Action – set out a vision for the future of



Source: HfL "A Framework for Action", 2007

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Proposed changes in clinical care pathways



Note: Later work focused on children and mental health pathways Source: HfL "A Framework for Action", 2007

6 delivery models to improve the quality of care in London



Home

There is increasingly potential to provide care in people's homes, including specialist care, rehab and support for long term conditions

Polyclinic/polysystem

Polyclinics provide the infrastructure for a polysystem to shift hospitalbased care into a more local setting, and improve existing GP and community care and social services

Local hospital

Local hospitals provide noncomplex inpatient and day case care in the local setting, ensuring patient access and convenience without sacrificing quality of care



Elective centres

Elective centres focus on specific types of activity and exclude emergency work to be more productive and produce better clinical outcomes



MARSO

6

Major acute hospital

Major acute hospitals enable co-location and critical mass of specialist services to maximise clinical quality and efficiency, some being a hub for teaching and R&D

Specialist hospital

Specialist hospitals retain established infrastructure, expertise and focus to deliver leading-edge complex services in a specific area





Polysystems were seen as core to out of hospital care delivery – different options for location and organisation



Eight enablers were identified as critical to delivering HfL

- 1. Commissioners need to be better able to commission high-quality services based on their population's needs, mainly by developing strengthened **commissioning** structures, roles and arrangements, with robust performance management
- 2. Strong individual and organisational **incentives** need to be developed through both the provider and commissioner angles to ensure delivery of high-quality and efficient care
- 3. Better **communications** are needed to better engage the public and other key stakeholders
- 4. Clinical **leadership** needs to be improved, by identifying the best leaders and ensuring they are properly developed, supported and incentivised
- 5. Better **information and IT** related to service performance and patient care will improve care quality and efficiency
- 6. The **workforce** needs to adapt to the new delivery model by shifting to the local setting and changing their roles, skills and contractual arrangements, and promoting greater mobility
- 7. London needs to manage **estates** better, by understanding the skills needed and partnering with appropriate experts, and better accessing capital
- 8. A diverse range of potential **ownership** models (including those involving non-traditional providers such as the third sector and private sector) to improve risk, innovation, flexibility and productivity needs to be examined



The core proposals of HfL were expected to improve quality of care AND reduce the costs of care

Core proposals of HfL to improve quality

Levers to reduce costs of care Improved access to urgent care services in Reduced "double running costs" through single the community to reduce use of A&E and point of access to urgent care (merged MIU/WIC, admission to hospital GP out of hours, GP in hours) Improved management of long term Reduced costs of clinical staff through improved conditions through better coordination of utilisation and role substitution from doctors to primary and community care services nurses/AHPs - underpinned by management of care across larger populations Consolidated model for provision of Reduced costs of overheads (receptionists, primary and community care over premises) through improved utilisation population of ~ 50K to provide more Shift of care out of acute sector into non acute integrated care sector where appropriate Integration of primary and community and De-commissioning of some services secondary care and shifts of care out of hospital closer to home Centralisation of complex services onto Increased scale, efficiency and quality from major acute sites centralisation contributes to expected tariff

reductions

The economic analysis of HfL concluded that it was more affordable than the status quo...



* All figures in real terms, 2005/06

Source: Outcomes of PCT allocation projections & activity and spend forecasts

new setting

ORIGINAL HFL

...with the projected savings primarily driven by improved care out of hospital supported by implementation of polysystems

Area	Savings, £m	Driver of savings			
		Decomm- issioning	Improved efficiency*	Shift out of acute	Improve m'ent of LTC**
Inpatients	415	✓		\checkmark	\checkmark
Regular attenders	10			\checkmark	
Outpatients	193	✓			
A&E	110	\checkmark		\checkmark	
Community	330		✓		
Primary	415		\checkmark		
Total (£m)	1.473				

* Includes reduced duplication e.g. paying for core primary care, OOH and A&E/MIU services **Includes panel management of patients with complex health and social care needs Over the **Set 8** months significant progress has been made on HfL implementation

Successful **consultation**, Consulting the Capital, which validated the Healthcare for London vision

Established central **support team** and high profile and highly successful **Clinical Advisory Group**

Proposals for designation of major trauma and stroke centres out to consultation

Detailed plans for the imminent **opening of seven new polyclinics**

Initial projects included unscheduled care, diabetes, local hospitals

New projects kicked off on maternity, mental health, children's and young people, end of life

Seven polyclinics were opened in April 2009...

Alexandra Avenue, Harrow Heart of Hounslow,





Gracefield Gardens,



Loxford Centre, Redbridge

Waltham Forest Centre, Waltham Forest





Barkentine Centre, Tower Hamlets



Hammersmith, at Hammersmith hospital







SOURCE: NHS London, updated 8/4/09

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However, interviews carried out during the HfL implementation review identified a number of key challenges moving forward

The tipping point towards transformation has not yet been reached



While some polyclinics have opened, the current moderate shifts of care out of acute have not yet transformed out-of-hospital care Current projects (e.g., stroke, trauma) have not yet been 'cash-releasing' and instead appear to be leading to 'additive' costs rather than reconfigurations

Similarly, although hospital admissions have started to stabilise they have not dropped to the extent expected under HfL implementation

Some other HfL projects – including the original projects on local hospitals, unscheduled care and diabetes – have had more limited traction and 'pull' from the system

There is some mismatch in ambitions – as evidenced by PCTs' CSPs which are incremental rather than radical in their approach The capabilities to support large scale change are not yet fully in place

With a number of barriers having been identified

There is frustration with the overall pace of change and frustration at large number of small initiatives rather than fewer transformational initiatives

You recognise that elements of the original vision have been diluted and the change has not been as dramatic as outlined in HfL

Significantly, the core principles (and expected savings) of polysystems have proven difficult to achieve with more focus on the buildings rather than the changes to care and behaviours.

Limited progress has been made on the key enablers, which are widely-perceived as barriers to progress

Frontline lacks key capabilities and capacity for implementation when set against competing priorities and operational challenges

For example, the rate of hospital admissions has not fallen to the extent expected under HfL implementation

Total hospital admissions in London SHA region, 2004/5 to 2007/8



CAG identified the current barriers to progress



There is a recognition that the context of HfL has changed over the last 18 months

Trends and developments affecting London

- Economy The current economic situation will put greater pressure on the system, and London needs to respond
- 2 NHS Next Stage Review Opportunity not to be missed for commissioners, providing new levers for change
- (3) Commissioning changes In London as an opportunity to address capability and capacity issues

391. -

In addition, the macroeconomic context has dramatically worsened in the last 12 months



SOURCE: BEA, team analysis



SOURCE: Department of Health Annual Reports, Operating Framework 2009/10 and 2010/11, team analysis

Declines in health care spend are typically observed after a crisis across European countries

Negative year-on-year health care growth within 2 years

Share of European countries experiencing negative year-on-year health care growth within 2 years of negative GDP growth



1 Austria, Belgium, Denmark, Germany, Iceland, Ireland, Luxembourg, Netherlands, Portugal, Spain, Sweden, Switzerland and UK

SOURCE: OECD

2 Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Norway, Poland, Portugal, Spain, Sweden, Switzerland, UK

In the UK, after the private sector recession comes the public sector one growth in public spend in real terms in the UK



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Pan-London model – inputs



For acute, the pan-London HfL model reconciles top down spend with bottom up activity to derive the starting point for 2007/8



£11.3bn spent on healthcare in London*, 2007/8



Total spend on purchasing healthcare across 31 Primary Care Trust in London, £bn



activity, plus additional costs for chitical care and other non-tail based services apportioned b

Source: PCT financial returns ASF08 2007/08, HES/HAS 2007/08, Reference Cost 2005/06

Current healthcare activity by service line, 2007/8

	Service lines Activity 000's (Spells/attendances) Examples					
HATE? Non Electure 547,000 Electure	Electiv e medicine	 Complex Non complex Long-term conditions Under 17s Complex Hanned admission for asthma, diabetes PCI, hepato-biliary procedures Neuropathies, sleep disorders, scoping, renal, haem Planned admission for asthma, diabetes 				
	Non elective medicine	 Complex Non complex Long-term conditions Under 17s Complex Acute MI, stroke DVT, pneumonia, pulmonary embolus Emergency admission for asthma, diabetes 				
	Elective surgery	 Complex High throughput Minor procedures Under 17s 164 Major GI procedures, transplants, neurosurgery Cataracts, arthroscopy, hernia Vasectomy, skin lesions 				
,121,000	Non elective surgery	 Complex 30 Non complex 142 Minor procedures 3 Under 17s 13 Trauma, major GI procedures, burns ENT, fractures Minor skin procedures 				
	Obstetrics	 Normal delivery, assisted delivery, caesarian section, neonatal discharge 				
	Paediatrics	 Paediatrics Neonatology 72 Cystic fibrosis, neoplasms, epilepsy Neonates with major/minor diagnoses 				
	Outpatient	 9,025 New and follow up outpatient consultations 				
	A&E	 Major Standard Minor 				
	Community care	> 8,889 • Health visitors, podiatrists, district nurses etc.				
	Primary care	>				
Source	a: HES 2007/8; PCT CSPs 2007/8; Q research	2008; GLA; Team analysis 34,554,070 2				
		= 34.5m				

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The HfL affordability model is structured around four key areas for scenarios and sensitivities



With the tightening economic context, there is uncertainty over future funding, with the base case forecast at 0% real growth from 2010/11





In our HfL model we have forecast activity growing overall by c. 4% CAGR in the base case

Outcomes of activity forecast and sensitivities

% CAGR from 2007/8 to 2016/17 (combined impact from demographics and residual growth)



1 Using GLA low demographic projections, and new base case residual growth projections

2 Using GLA low demographic projections and new lower end residual growth projection sensitivity

3 Using GLA high demographic projections and new higher end residual growth projection sensitivity

SOURCE: HES online 2000/1 to 2007/8, all England; Outpatient HAS 2000/1 to 2007/8; Primary care QResearch 2008; consultation rates 2001-2008; Office for National Statistics 2009, Health Statistics Quarterly 33, Population: age and sex, 1981 onwards, GLA population projections 2007 & 2008; PCT CSPs 2008

2 Which leads to total activity increasing 42% by 2016/17 in the base case

Outcomes of activity forecasts and sensitivities, spells/attendances, (k)



1 Using GLA low demographic projections, and new base case residual growth projections

2 Using GLA low demographic projections and new lower end residual growth projection sensitivity

3 Using GLA high demographic projections and new higher end residual growth projection sensitivity

SOURCE: HES online 2000/1 to 2007/8, all England; Outpatient HAS 2000/1 to 2007/8; Primary care QResearch 2008; consultation rates 2001-2008; Office for National Statistics 2009, Health Statistics Quarterly 33, Population: age and sex, 1981 onwards, GLA population projections 2007 & 2008; PCT CSPs 2008



We have based these on updating the original HfL modelling which showed activity growth in 2000/1 to 2005/6 was considerably higher than demographics alone



Observed compound annual Component due to **Residual growth** Hospital activity (CAGR%) growth 2000/01 to 2005/06* demographics (CAGR%) 0.5% Medicine 3.1% 2.7% 0.5% 1.1% Surgery 0.7% 2.1% .5% Obstetrics 0.6% NA Paediatrics NA NA Attendances, consultations, etc. Regular attendances NA NA NA Outpatients 0.7% 0.6% 0.1% A&E 8.6% 0.6% 8.0% 3.2% Community care 2.8% -0.4% Primary care 3.6% 0.7% 3.0% * Analysis covers the period 2000/01 to 2005/06 where data is available. Community care rates calculated on sample PCT data 2004-06. Primary care analysis provided by LHO (2001-05) Source: HES Online 00/01-05/06, all England; Outpatient HAS 00/01-05/06, London providers; Primary care QResearch 2006, consultation rates 2001-05,




Using the latest actuals from 2000/1-2007/8 shows the

population component has slightly increased while the 'Higher' than orig HfL

Using GLA high for 2008 Using GLA Lowfor 2007



* Analysis covers the period 2000/01 to 20078 where data is available. Community care rates for 2000/1 calculated on sam ple PCT data 2004-06 and in 2007/8 from PCT CSP submissions. Primary care based on scale up of Q research data to London population levels

** 5.9% if walk- in is excluded; 6.1% if walk- in is included

*** No comparable data sets available for 2000/1 to 2007/8 (original based on extrapolation of 2004-2006 data from sample PCT data)

Source: HES Online 00/01-07/08, all England; Outpatient HAS 00/01-07/08, London providers; Primary care QResearch 2008, consultation rates 2001-08,

Office for National Statistics 2009; Health Statistics Quarterly 33, Population: age and sex, 1981 on wards. GLA population projections, 2008

Taking these together, we have adjusted the baseline in medicine, A&E and paediatrics

Hospital activity	Orig H foreca	lfL resid ast (CAG	dual GR%)	New residual base forecast (CAGR%)	Rationale	Sensitivity range (CAGR%)		
	Low	Base	High			Low	High	
Medicine	1%	2.7%	3.7%	1.0%	Lower actual than originally anticipated; continues to be higher than surgery given technology shifts	0.5%	2.7%	
Surgery	0%	0.5%	0.5%	0.5%	Assume recent higher rates are temporary effect of 18 weeks	0%	0.5%	
Obstetrics	0%	1.5%	1.5%	1.5%	No significant change	0%	1.5%	
Paediatrics	0%	0%	0%	1.0%	Increased based on input	0%	1%	
Attendances, consultations, etc.								
Regular attendances	0%	0%	0%	0%	No significant change	0%	0%	
Outpatients	0%	0.1%	2.1%	0.1%	No significant change	0%	2.1%	
A&E	1%	4%	5%	0%	Reflecting 'flatline' growth in last two years	0%	4%	
Community care	0%	3.2%	4.2%	3.2%	No significant change	0%	4.2%	
Primary care***	1%	4.3%	5.3%	4.3%	Assume expected improved access will increase residual growth (as assumed in original HfL)	1%	5.3%	

* Analys is covers the period 2005/6 to 2007/8 where data is available. Community care rates use original HfL numbers for 2004 to 2006; Primary care based on scale up of Q research data to London population levels

HES Online 05/06-07/08, all England; Outpatient HAS 05/06-07/08, London providers; Primary care QResearch 2008, consultation rates 2001-08,

Office for National Statistics 2009; Health Statistics Quarterly 33, Population: age and sex, 1981 on wards. GLA population projections, 2008

^{**} Lower number if walk-in centres are excluded, higher number if they are included

^{***} Pan-London num umber available for 2005/7 from PCT CSP's - HfL used a range for 2005/6 from 2.1 million to 8.1 million

The HfL proposals will support lower costs of delivery and enable capture of the savings required to affordably improve health outcomes



Original HfL activity settings and decommissioning

LICCUVECCIUE	local hospital	Polyclinic	Home	(decommissioned)	
%		%	%	%	
	7				
4	43	23			
	50				
9	15	10			
	12				
	73	11			
	63	20			
	13	4			
40				7	
85				5	
32		59		8	
35				88	
	45				
		100			
	12	44	ومتزغر غراه		
	22	7			
	12				
	34		6		
	51	32			
13	13	(40) -		(20)	
	20	50		10)	
		50	50		
		70	7		
side of, but linked i	nto, polydinics	\sim		ie no ente	4
si de PCT	of, but linked i , Kingston PC	of, but linked into, polydinics , Kingston PCT, Tower Hamlets F	of, but linked into, polydinics , Kingston PCT, Tower Hamlets PCT, Sutton &	of, but linked into, polydinics , Kingston PCT, Tower Hamlets PCT, Sutton & Merton PC	, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT 39

• Rationale for activity distribution (1/3)

Service lines	Rationale
Elective medicine	 Complex Majority of care delivered in major acute/specialist centres of excellence; where some HRGs allocated to the service line contain a mixture of complex and non-complex work (e.g., "Other non-viral infections), ICD10 codes were used to agree proportion of activity in local setting
	 Non complex Starting assumption is that majority of care should be delivered in local hospital setting but with some cases (e.g., comorbidities, patients receiving novel therapeutic agents, other complicating factors) requiring major acute hospital; final distribution reflects fact that a large proportion of the service line is chemotherapy and red blood cell disorders for which a proportion is assumed to be able to be delivered in polysystem
	 Long-term conditions Hospital-based planned interventions for long-term conditions assumed to require local hospital setting except for patients with rarer chronic conditions or with comorbidities which require major acute setting
	Under 17s Majority of care assumed to require major acute or specialist hospital; some opportunity to provide diagnostic procedures or minor interventions in local setting
Non elective medicine	 Complex Vast majority of emergency complex medicine will require major acute infrastructure; some cases will be appropriate for local setting (e.g., stroke > 3 hrs since onset of symptoms, non-complex portion of some HRGs allocated to the service line which contain a mixture of complex and non-complex work)
· ·	• Non complex • Majority of care expected to be delivered at local hospital with escalation of a few more complex cases to major acute setting; some patients currently requiring hospital admission could be dealt with in polysystems with good diagnostic and community infrastructure
	 Long-term conditions Majority of care assumed to require local hospital setting; shift to polydinic driven by clinical evidence where available, or expert opinions; some conditions or patients with comorbidities assumed to require major acute hospital setting

• Rationale for activity distribution (2/3)

Service lines		Rationale
Elective surgery	Complex	 Majority of care delivered in major acute/specialist centres of exœllenœ; where HRGs allocated to the service line contain a mixture of complex and non-complex work (e.g., Intermediate breast surgery), procedure codes were used to agree proportion of activity in elective centre; where published evidence exists that some procedures are not dinically indicated, this was used to determine level of demand management
	 High throughput 	 Majority of procedures allocated to elective centre; where published evidence exists that some procedures are not dinically indicated, this was used to determine level of demand management; 10% of cases assumed to be more complex patients and require infrastructure of major acute hospital
	 Minor procedures 	 Activity allocated to polysystem where appropriate based on review of procedures within each HRG (e.g. minor skin procedures); where cases are not appropriate for polysystem they are allocated to elective centre; where published evidence exists that some procedures are not clinically indicated, this was used to determine level of demand management
	• Under17s	 Less complex procedures can take place in dedicated paediatric wards at elective centre; more complex assumed to go to major acute or specialist; where published evidence exists that some procedures are not clinically indicated, this was used to determine level of demand management; majority of cases are intermediate mouth o throat procedures
	Complex	 All patients will be channelled to major acute setting
Non elective surgery	Non complex	 Local hospitals will serve their local catchment population for minor trauma (major trauma goes to major acute hospitals); majority of other emergency surgery cases go to major acute hospitals if surgical intervention is indicated
	Minor procedures	All emergency minor procedures would be dealt with in local hospitals
	• Under17s	 Majority of patients would be treated at major acute or specialist hospital; a few less complex cases would be managed in paediatric assessment units at local hospitals o in dedicated paediatric urgent care facilities
		4

• Rationale for activity distribution (3/3)

Service lines		Rationale
Obstetrics	• Deliveries	 Roughly half of obstetric units would be collocated with major acute hospitals; in addition, high risk cases or cases with major complications would be treated at major acute hospital; 10% of normal deliveries would take place at home
	 Antenatal admissions 	 Antenatal admission would be distributed among hospitals with a greater number going to major acutes to represent that fact that they would be higher risk patients; some antenatal admissions could be avoided by use of the polydinic and improved community infrastructure
Paediatrics	 Paediatrics 	 There is a dinical evidence base for consolidating the majority of paediatric "P-code" HRGs; however a proportion of less complex cases could be treated at local hospitals (e.g., mild asthma) or even in polysystems where admissions could be prevented through use of improved diagnostic and community infrastructure
	 Neonatology 	 Major acute hospitals will provide a level 2 or level 3 NICU; local hospitals would have a level 1 NICU when there is a collocated obstetric unit
Outpatients	> ? Enderce? Sources	 A number of follow-up outpatient appointments are not necessary; of the remainder, it is assumed that half could be devolved to a local setting and half would remain in the hospital setting for efficiency reasons and need for access to infrastructure
Regular attendances	>	 The vast majority of these are renal dialysis of which the bulk could be delivered in a polysystem or local hospital; there is also a high volume of chemotherapy which could also be delivered in the polysystem or local hospital but some will require the major acute infrastructure (e.g., novel therapeutic agents, patients not tolerating treatment well)
4&E	NU DENCE S	• 60% of A&E activity is typically minor illness or minor injury and can be dealt with either by telephone advice or within the polysystem; half of the remainder is likely to require step up to local hospital infrastructure (e.g., pneumonia) with the other half requiring major acute hospital infrastructure (e.g., acute stroke, major trauma)
Community care	assured	 50% of community care assumed to be delivered within polysystems and 50% at home; the polysystem would however form a base for all of these services
Primary care	> A	 It is assumed that 70% of GPs work out of polydinic facilities with the remainder working in large practices networked to polydinics 42

A

Operational efficiencies in the acute sector are modelled via the net tariff

Real tariff change (against RPI¹)

	2008/9 - 2010/11	2011/12 - 13/14	<u>2014/15 – 17/18</u>	Driver of assumptions
Healthcare cost inflation above RPI	2.4%	1.0%	1.0%	Original Monitor guidanœ used until 2010/11 Cost inflation then assumed
	•	•	•	economic environment and increasing workforce supply
NHS efficiency requirement	3.0% ²	4.0%	4.0%	As per original Monitor guidanœ to 2013/14 and assumed at 4%
	θ	θ	θ	subsequently
Real tariff change	-0.4%	-3.0%	-3.0%	As per original Monitor guidanœ to 2013/14 and assumed at 4% subsequently

1 Assumed to be 2.7% p.a. 2 Increases over period from 2.4% to 3.5%

Source: Monitor guidance March 2009; interviews

B Removing duplication will be modelled through changes in primary care payments

	24 hour period												
Paid activities	8 am	10 am	12 pm	2 pm	4 pm	6 pm	8 pm	10 pm	12 am	2 am	4 am	6 am	Payment type
A&E													Fee for service
		GN	/IS/PN	1S		Ext. hours	5						Capitation
<i>GP</i> tariffs								14-10	Dut of h	nours			Capitation
Enhanœd service Walk-in centre	7						-					1.1.1	Payperuse
		F. 1993				-	-	-		College of	-	- Colorado	
Radicalness' of	ever pu Stop pa	ull Lying du	uplication	on of e	• extende	ı ed houi	rs and	• out of h	our fee	s betw	veen 6-	-8pm, w	Fee for service
Grgent care centre 'Radicalness' of Core scenario Aggressive scenario	ever pu Stop pa ~£20m GPs pa	ll lying du across id a fee	uplication Londo	on of e n ¹ ervice a	extende at £50/	ed hour	rs and o	out of h , with to	our fee tal sav	es betw	veen 6- f∼£25-	-8pm, w -40m ac	Fee for service ith total savings of cross London
Orgent care centre 'Radicalness' of Core scenario Aggressive scenario Pace of impleme	e ver pu Stop pa ~£20m GPs pa	ll across id a fee	uplication Londo	on of e n ¹ ervice a	extende	ed hour	rs and d	• out of h , with to	our fee	es betw	reen 6- f~£25-	-8pm, w -40m ac	Fee for service ith total savings of cross London
Orgent care centre 'Radicalness' of Core scenario Aggressive scenario Pace of impleme Straight line	ever pu Stop pa ~£20m GPs pa ntation	II across id a fee	uplication Londo for se	on of e n ¹ ervice a	extende at £50/ dually u	ed hour consul	Itation ²	out of h , with to	our fee tal sav	es betw ings o	reen 6- f~£25-	-8pm, w	Fee for service ith total savings of cross London

SOURCE: HfL feasibility, Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT



B Many operational efficiency parameters will be adapted according to latest learnings

Detailed facts/ assumptions provided

'Radicalness' o	f lever pull			Pace of implementation
Service line	Efficiency parameter	Core	Aggressive	
PC	More efficient GP utilisation	Gains implied by zero real terms tariff increase (original HfL assumption) ¹	6-11% increase in efficiency (patient-facing time) + 15% reduction prescribing costs	Straight-line Implementation follows the pace of shift to lower care setting
Home base community care	More efficient nurse utilisation	Gains implied by zero real terms tariff increase (original HfL assumption) ²	10-15% increase in efficiency (patient-facing time)	Front-end: Same as straight-line

1 Reflecting learnings from interviews with polydinics manager (TH), detailed dinical specification outcomes workshops (SMPCT) and learnings from other PCTs (Redbridge, NEL)

2 Based on current spend or best knowledge

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SOURCE: HfL feasibility; Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

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BPrimary care – Low-performing GPs can spend less than 30% of their contracted hours actually seeing patients

Number of hours



BCommunity care – Potential to deliver same level of activity with 11–15% to do less staff, if district nurses achieved median productivity or 10% above



1 District nurses

Source: 3-month sample of district nurses in provider arm of a PCT; team analysis

47

 Community care – One PCT has identified a set of initiatives to increase efficiencies of service line services by c. 15%

PCTEXAMPLE

Share of savings % of budget 08
8.0
3.3
1.0
1.0
0.7
0.6
14.6





C Many operational efficiency parameters will be adapted according to latest learnings

Detailed facts/ assumptions provided

'Radicalness' of lever pull			Pace of implementation
Efficiency parameter	Core	Aggressive	
Medical workforce — Staff utilisation	54% for PC and 64% for other medical staff	64% for all medical staff	Straight-line Implementation follows the pace of shift to lower care
 Level of role substitution 	Original HfL assumptions amended for increased consultant/GP ratio in OP ¹	More role substitution from consultant/GP to nurses ¹	setting Front-end: Same as straight-line
 Time required per case 	Original HfL assumptions across all activities ¹	Reduction of consultation time by 33% in primary care	
Supplies/diagnostics			
 Prescribing costs 	Original HfL assumptions ²	10% reduction for secondary care, 15% for primary care	
SuppliesDiagnostics	Original HfL assumptions ² Updated HfL assumptions	Original HfL assumptions ² Updated HfL assumptions	
Admin overheads (receptionists,)	1 A&C + 2 receptionists in consolidated; 5 A&C + 6	1 A&C + 2 receptionists in consolidated; 5 A&C + 6	
	receptionists in hub & spoke	receptionists in hub & spoke	

1 Reflecting learnings from interviews with polyclinics manager (TH), detailed clinical specification outcomes workshops (SMPCT) and learnings from other PCTs (Redbridge, NEL) 2 Based on current spent or best of knowledge SOURCE: HfL feasibility, Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

O Polysystem - Estimated time per consultation and proportion of a of atoff Changes from original Hfl conci

consultation	Time required per care Hours		GP %			Consultant %		Nurse practitioner/AHP ¹ %			Staff nurse		
	HfL	Core	Aggr.	HfL	Core	Aggr.	HfL	Core	Aggr.	HfL	Core	Aggr.	All scenarios ²
Elective medicine		1.1.1.1				-					1000		
Complex	0.50	Same	0.50	10	Same	5	85	Same	Same	5	Same	10	60
Non-complex	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	60
LTC ¹	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	60
Under17s	0.50	Same	0.50	80	Same	75	15	Same	Same	5	Same	10	60
Non-elective medicine													
Complex	0.50	Same	0.50	10	Same	5	85	Same	Same	5	Same	10	60
Non-complex	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	60
LTC ¹	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	60
Under 17s	0.50	Same	0.50	80	Same	75	15	Same	Same	5	Same	10	60
Elective surgery													
Complex	0.50	Same	0.50	10	Same	5	85	Same	Same	5	Same	10	60
High-throughput	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	90
Minorprocedures	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	75
Under 17s	0.50	Same	0.50	80	Same	75	15	Same	Same	5	Same	10	60
Non-elective surgery													
Complex	0.50	Same	0.50	10	Same	5	85	Same	Same	5	Same	10	60
Non-complex	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	60
Minorprocedures	0.50	Same	0.50	70	Same	60	10	Same	Same	20	Same	30	75
Under17s	0.50	Same	0.50	80	Same	75	15	Same	Same	5	Same	10	60
Paediatrics													
Paediatrics	0.50	Same	0.50	80	Same	70	15	Same	Same	5	Same	10	60
Neonatology	0.50	Same	0.50	÷	in the second		-	-		-	-	-	-
Obstetrics	0.50	Same	0.50	-	14		-	-	-	-	-	140	-
Regular attendences	0.50	Same	0.50	10	Same	Same	10	Same	Same	10	Same	Same	70
Outpatients	0.50	Same	0.50	32	10	10	33	55	40	37	Same	50	60
A&E	0.25	Same	0.25	60	Same	50		1.1+1	-	40	Same	50	60
Community care	0.50	Same	0.33	-		-	-	0-0	-	67	Same	Same	33
Primary care	0.25	Same	0.17	60	Same	50	-	-		40	Same	50	

1 Allied health professional e.g., physiotherapist 2 HfL core and aggressive SOURCE: HfLfeasibility; Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

B Drug spend – Potential reduction of 11-16% spend for primary care and 8-12% for activities shifted from hospital through pulling different price and volume levers

Potential savings 11,800 % of spend £b 450 Secondary 10.000-10.600 1.2-1.8 10 - 152,500 360-600 care 170-280 110-210 60-160 60-110 2,200-2,300 0.2-0.3 8-12 Primary 9,300 care 7,800-8,300 1.0-1.5 11-16 Current Reduce Optimise Increase Reduce Spend in Reduce Increase spend in branded variability generics drugs hospital clawback wholeafter drug drug price in prescri- penetradrugs salers' to - PPRS bing pharmacy revenues efficiency tion procurescheme practices ment pro-(GPs) gramme

£million, 2008/09. Drugs spend across England

SOURCE: Office of Fair Trade – Financial Flows Relevant to Medicines; DH – PPRS 2009; Laing & Buisson NHS Financial Report, Espicom; Euro Observer 2008; DHL website

C Recent polysystem and PCT studies have confirmed the possibility to shift to lower cost settings, with variations by service lines

Detailed facts/ assumptions provided

Service line	Core	Aggressive	
Elective medicine	23% of non-complex, 10% of under 17 and 0% of long term conditions	As per original HfL	Straight-line 19 polyclinics per year up to 2015/16 to
Non-elective medicine	11% of non-complex, 20% of LTC's and 4% of under 17's	As per original HfL (not including LTC management)	allow full savings implementation by 2016/17 - 38 polyclinics by 2011/12 - 130 by 2016/17
Outpatients	40%	55% (Redbridge, SMPCT)	Front-end: 50% of remaining
A&E	50%	60%	implemented by 2011/12
Primary care	100%	100%	- 65 polyclinics by 2011/12 - 130 by 2016/17
Elective surger no new evidence per original Hfl	y, non-elective surgery, regular attendar ce post HfL) and paediatrics (confirmation in both core and aggressive scenarios	nces, obstetrics, community care (due to on of HfL assumptions) will be modelled as	

SOURCE: HfL feasibility; Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

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sencelver agen as a some!

Outpatients - Much outpatient activity could be conducted in the local (C)care setting



ie -Norcal endence here. Sutton + Meter KT's guessuch.

Outpatients - Sources of radiology imaging requests suggest much could be delivered in the community as well

Breakdown by source of referral, all modalities¹, %



There is a large potential to deliver radiology services in the community

56% of referrals are non-acute, all of which can be delivered in out-of-hospital settings

Of the 26% referred from A&E, the majority are for plain films, which can also be delivered via community-based urgent care centres

This above leaves only a minority of volume tied to acute hospitals

1 Data from Bedfordshire and Hertfordshire SHA

2 Other includes 3000 MRIs purchased from Lodestone, dental sources for X-rays

rejoures? Redrogmales COutpatients - A significant shift has occurred already in the US from inpatient to outpatient, and from hospital to community



C A&E - Analysis of A&E attendances in London shows a large proportion could be dealt with in primary care



LAS estimates that in 2013, 200,000 fewer patients will be taken to A&E through an improved operational model that is better able to deliver appropriate definitive care first time to more patients
 This will require a greater range of care options such as telephone advice, treatment at home, emergency care from a single responder or direct referral to alternative providers such as walk-in centres, minor injuries units, community psychiatric services or inter mediate care teams

1 Based on HRG coding

SOURCE: Large London teaching hospital, LAS Annual Report, 2005/2006

Investing for the future in LTC and case management contributes to shifting more care to lower cost settings

Detailed facts/ assumptions provided

'Radicalness' of lever pull		Pace of implementation
'Radicalness' of lever pull Core (original HfL assumptions) 20% of total emergency hospital cases for long- term conditions could be prevented through better care in a polyclinic (each initial hospital admission was replaced by 4	Aggressive (new considerations) Analyses from Redbridge PCT, Tower Hamlet PCT, SMPCT as well as the 'Achieving World Class Productivity' study suggest 30- 40% of total (all) emergency admission costs could be saved through improved management of people with long tem	Pace of implementation Straight-line All levers implemented gradually up to 2016-17 Front-end: All levers reach 50% implementation by 2011/12 100% implementation by
consultations in the polyclinic)	This is modelled by increasing non- elective medicine shift to polyclinics as follows: 10% complex, 30% non- complex and 40% LTC	2016/17
		remares? Stilt? enderce?

SOURCE: HfL feasibility; Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

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With good disease management at primary care level, hospital activity for long term conditions can be significantly reduced

		Reduction unschedule	in acute ed activity	Increase in PC consultations	if could work
Condition	Intervention	Adm ¹	LOS	LTC in London	Core references _ but reeding
Congestive heart failure	Multi-disciplinary managed care ² Specialist nurse interventions Discharge planning and post discharge support	23-85% ³ 58% 25%	54%	x 2.5	Heart, 2005, 91, 899-906 (74 trials); JGenIntemMed, 1999, 14 (2), 130-4 (7 trials); Chest, 2005, 127; 2042-8 (4yr study) BMJ, 2001; 323; 715-8 (1 RCT) JAMA, 2004, 291, 11 (18 RCTs) CHD NSF Chapter 6 Euro Heart Journal, Guidelines for the diagnosis and treatment of CHF, 2005
Asthma	Active case management ⁴ Specialist asthma nurses	36% 10-38%		x 1.7	Cochrane,2003(1) (36 trials); BTS Asthma Guideline, 2004 (25 trials) DH Compendium of CDM citing BMJ,2004,328,144;Thorax,2001,56,687- 90;Pub Health Med,2002;25;258-60
COPD	Early discharge planning and hospital-at-home Multi-disciplinary pulmonary rehab for 6-12 weeks	10-30% 10-30%	50% 50%	x 1.8	Thorax(NICE),2004,59,39-130 (2 RCTs; 1 for each intervention) NHS Institute Directory of Ambulatory Emergency Care for Adults (citing NICE guidance)
Diabetes	Active disease management Specialist primary care (GPwSIs)	25%	40%	x2.4	DH CDM Compendium citing Cochrane (41 RCTs) & 3 RCTs Diabetes Med, 2003(1),32-8 (1 study)

1 Hospital readmission (inpatient); 2 Best evidence for programmes of 3m including education, lifestyle advice, exercise, home visits, nurse case managers and regular monitoring; 3 Weighted average = 27%; 4 Including written care plan, supported self-monitoring and regular practitioner reviews

SOURCE: Disease prevalence numbers from QOF data for 2005/6 (applied to GP registered populations for percentage prevalence), NHS Information Centre; Decision Resources Patient Base for CHF prevalence and severity breakdowns between conditions; Department of Health (for GP registered populations)

Investing for the future in prevention has potential to bring some savings, limited given time frame

'Radicalness' of lever pu	II ¹	Pace of implementation
Core (original HfL assumptions)	Aggressive (new considerations)	
None given timeframe	An overarching theme of vascular prevention was identified for London, which could deliver significant improvements in obesity, smoking and vascular diseases prevalence	Straight-line All levers implemented gradually up to 2016-17
\cap	Although many studies exist to prove the clinical impact of such prevention programs, exact costs, financial benefits and implementation timelines remain unclear – but early work suggests that detection, monitoring and social marketing for prevention could save ~£2.4b p.a. nationwide once all healthy behaviour initiatives are implemented	Front-end: All levers reach 50% implementation by 2011/12 100% implementation by 2016/17
e forras.	In our scenarios, we assume (conservatively) that an additional 10% complex, 10% non- complex and 10% LTC non-elective medicine can be prevented through early detection and counselling ¹ , as suggested by early studies on identifiable morbidity and hospital activities	

1 Each initial hospital admission (at £3,164 current unit cost) is replaced by 4 consultations in the polysystem (at £85-105 unit cost)

SOURCE: HfL feasibility; Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

An approach to quantifying impact of prevention

	London prevalence	Morbidity	Mortality absolute	Mortality a voidable	Wider impact
Smoking	1,325,000 ¹	CHD prevalence ⁵ – 193,000 Cancer prevalence ⁵ – 58,000 (with hospital activity due to respiratory chemotherapies > 4,500)	None - all avoidable	Early deaths from smoking - 29,680 ⁸	Passive smoking
Diet (5 a day) Physical	3,610,000 ⁴ (less than 5-a-day) 2,170,000 ⁴	Obesity adults ⁷ - 1,105,000 Obesity children ⁷ - 291,000 Co-morbidities: diabetes, hypertension, dus lipodaemia, breathlessness, sleep	None - all avoidable	More fruits & vegetables - 5,000 ¹¹ Reduction of salt - 2,800 ¹¹	Cost of obesity at ~ £6bn for NHS ¹¹
acuvity	(less than 30 min acti- vity/ week)	apnoea, gall bladder disease			
CHD	193,000²	Hospital activity ³ due to hypertension ^{6,9} - 13,250 Hospital activity ³ due to CHD ^{9,10} - 91,100	17,300 ¹²	Early deaths due to heart disease and stroke – 5,150 ¹³ (deaths before age 75)	Absolute number of early deaths

Current identified hospital activity related to smoking and CHD represents at least 10% of non-elective medicine, which could be prevented by applying new care pathways and taking charge of patients through poly-setting Although the impact of obesity is substantial in terms of co-morbidity and costs (potentially £6bn annually nationwide), more studies are required to identify exact costs, impact and mechanism of preventive measures, which need alignment of a broader set of public networks (health, transportation, city planning, ...)

¹ General Household survey 2005, population data 2007; ² QOF 2006–2007; ³ Inpatient, day case, regular attendances at NHS trust; ⁴ Health Survey for England 2006, The Information Centre, population 2007; ⁵ QOF 2006–07; ⁶ NHS Londo; ⁷ Health Survey for England 2006, population 2007; ⁸ ERPHO, 2003–05; ⁹ NHS London, HRG E04, 11-15, 22-23, 2005–2006; ¹⁰ NHS London, HRG D39-40, 2005–2006; ¹¹ "Food – An analysis of the issues", Government 60 Strategy Unit (2008); ¹² ONS, 2006; ¹³ Deaths < 75 years, deaths due to diseases of the circulatory system, ONS 2006;

Activity estimated to be provided in polysystem – original HfL model and new learnings

	Original	Other models		C	D	B Agg (with		
	HfL (core)	S&M	Redbridge	NEL ²		(without LTC)	(with LTC)	prevention)
Elective medicine								
Complex	0	0	0	1		0	0	0
Non-complex	23	11	27	14		23	23	23
LTC ¹	0	0	36	3		0	0	0
Under17s	10	17	Х	Х		10	10	10
Non-elective medicine					1			22222222
Complex	0	0	0	3	Α	0	10	20
Non-complex	11	0	0	2	I N	11	30	40
LTC ¹	20	0	0	6		20	40	50
Under17s	4	0	х	х		4	4	4
Elective surgery					[
Complex	0	0	0	9		0	0	0
High-throughput	0	0	0	7		0	0	0
Minorprocedures	59	60	42	43		59	59	59
Under17s	0	0	X	X		00	0	0
Non-elective surgery								
Complex	0	0	0	2		0	0	0
Non-complex	0	0	0	3		0	10	10
Minorprocedures	100	0	80	27		100	100	100
Under17s	4	0	Х	х		4	4	4
Paediatrics								
Paediatrics	7	7	17	х		7	7	7
Neonatology	0	0	х	х		0	0	0
Obstetrics	0	0	37	0	/	0		0
Regular attendances	32	5	0	20		32	32	32
Outpatients	40	67	55	38		55-70 ³	55-70 ³	55-70 ³
A&E	50	0	0	57		60-70 ³	60-70 ³	60-70 ³
Community care	1004	x	41			100	100	100
Primary care	1004	x	x			100	100	100

1 Long term condition – e.g., diabetes; 2 Preliminary; 3 High range if less activity is decommissioned; 4 Was only 50% in original HfL assumptions but increased to 100% to reflect hub and spoke model

SOURCE: HfL feasibility; Polyclinic plans; Redbridge PCT; Kingston PCT; Tower Hamlets PCT; Sutton & Merton PCT

F The amount of unnecessary elective procedures and duplication in A&E will be modelled in different scenarios

Detailed facts/ assumptions provided

adicalness' of	lever pull				Pace of implementation		
	Core		Aggressive				
Service line	% activity de- commissioning	Rationale	% activity de- commissioning	Rationale	Straight-line		
Elective surgery	ective irgery "minor procedures" and 8% 'under 17' (original HfL assumption)	Published evidence that some procedures are not clinically indicated	7% of overall procedures with no or limited clinical benefit	More ambitious assumptions likely to be review ed natio- nally based on need to improve productivity	Front-end: All levers implemented gradually up to 2016-17 Front-end: All levers reach 50% implementation by 2011/12		
Outpatients	20% of total activity ¹ (original HfL assumption)	Est. proportion of unnecessary first and follow-up patient visits	30% of total activity ²	More ambitious reduction in number of follow-up appointments	100% implementation by 2016/17		
A&E	5% (reduced from 10% in H/L)	Est. proportion of minor illness/injury that can be dealt with by self care	10% (original HfL assumptions)	Same	Additionally, prioritizing		
Diagnostics	0%	-	10-15%	Reduction of GP referrals' variability in diagnostics (to national median)	intervention (without any change in the life years of the population) could bring additional savings		

1 Roughly equivalent to decommissioning 15% of first appointments with a follow-up to first ratio of 2.2 (between national median and top quartile) 2 Equivalent to decommissioning 15% of first appointments with a follow-up to first ratio of 1.90 (national top quartile)

SOURCE: HfL feasibility, Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

F Elective surgery - Procedures with limited clinical benefit represent 3-10% of activity and could save £25-65 millions¹ across London (1/2)

		Reduction	, %	Potential s		
		Minimum	Maximum	Minimum	Maximum	-
Polativalu	Tonsillectomy	10	90	0.7	6.6	
ineffective	Spinal cord stimulation	0	50	0	<0.1	
interventions	Back pain – injection and fusion	20	90	0.5	2.4	1
	Grommets (surgery for glue ear)	10	90	0.3	2.3	£2-11m ¹
	Knee washouts	20	90	0.5	2.2	
	Trigger finger	10	33	0.2	0.6	
	Dilation can curettage for women < 40	10	70	<0.1	<0.1	
	Jaw replacement	5	10	<0.1	0.1	
	Minor skin surgery for non-canœr lesions	10	25	3.7	9.3	
Potentially	Inguinal, Umbilical and Femoral Hernias	25	50	3.1	6.2	
interventions	Incisional and Ventral Hernias	10	75	0.3	2.4	
	Aesthetic surgery – Breast	50	80	1.2	1.9	
	Varicose Veins	20	80	1.1	4.5	£10-22m ¹
	Aesthetic surgery – ENT	20	60	0.4	1.2	
	Other Hernia procedures	10	30	0.2	0.6	
	Aesthetic surgery – Plastics	20	95	0.1	0.5	
	Aesthetic surgery – Ophthalmology	20	30	0.2	0.3	
	Orthodontics	5	80	<0.1	<0.1	

1 Assumes that only 80% of the maximum potential is achieved

Note: Cancelled procedures not included in analysis

Source: LHO - Save to invest: Developing criteria-based commissioning for planned health care in Londor; HES 2007/08; team analysis

Elective surgery - Procedures with limited clinical benefit represent 3-10% of activity and could save £25-65 millions¹ across London (2/2)

	F	Reduction	, %	Potential savings. £m		
	Ĩ	/linimum	Maximum	Minimum	Maximum	
Effective	Knee joint surgery	15	30	4.7	9.4	
interventions with a	Primary hip replacement	15	30	2.8	5.6	
close benefit/ risk	Hip and knee joint revisions 🤌	15	30	2.7	5.4	
cases	Cataract surgery	5	25	1.3	6.5	
	Female genital prolapse/stress incontinence (surgical)	10	25	0.5	1.3	
	Wisdom teeth extraction	0	24	0	1.0	
	Dupuytren's contracture	10	33	0.1	0.4	
	Cochlear implants (inner ear surgery)	0	25	0	0.4	
	Other joint prosthetics/replacements	15	30	0.2	0.5	
	Female genital prolapse/stress incontinence (non-surgical)	5	25	<0.1	<0.1	
Effective interven-	Hysterectomy for non-cancerous hea menstrual bleeding	vy 10	70	1.1	7.6	
effective	Carpal tunnel surgery	10	33	0.4	1.2	
alternatives should	Elective cardiac ablation	5	50	0.1	1.1	
e tried first	Anal procedures	5	15	0.1	0.4	
	Bilateral hip surgery	15	30	<0.1	<0.1	

Total of elective procedures

2-3% 9-10%

1 Assumes that only 80% of the maximum potential is achieved

Note: Cancelled procedures not included in analysis

Source: LHO - Save to invest: Developing criteria-based commissioning for planned health care in London; HES 2007/08; team analysis

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Outpatients - PCTs could decommission 6-14% of first outpatient appointments by bringing London referrals to high national standards



SOURCE: NHS Better Care, Better Value Indicators

Outpatients - Follow-up appointments could be reduced 20% by stepping down to national top quartile benchmark

Outpatient follow-up to new appointment ratio for London acute trusts, 2008-09





A&E – Rapid interventions team assessment service refuses acute admission by 8% Case study



Sources: NHS Modernisation Agency. 2002, Improvement in Emergency Care: Case Studies I.



SOURCE: DH imaging and diagnostics statistics, DH exposition book 09/10

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4 For each given scenario on the extent of implementation, we are developing two trajectories – 'straight-line' and 'front-loaded' (faster)

Additional saving

••••

Baseline Cost Cost saving Core target Cost saving 2 Ta Fast Aggressive target 2a Fast 2011 2017 Time 4 different cost scenarios to calculate with model 1 Core target 2017 2 Aggressive target 2017 2a Aggressive 'Fast' 2011 1a Core 'Fast' target 2011



Contents

Context to the work

Broad model structure and 2007/8 pan-London starting point

Detailed pan-London assumptions

Detailed polysystem modelling assumptions and unit cost outputs

Implications for acute providers

Implications for out-of-hospital settings

Miscellaneous
Bottom-up costing methodology – Polysystem



Activities covered in the polysystem model

Included in space calculation	Excluded from space calculations
Elective medicine activity shifted from acute Non-elective medicine activity shifted from acute Elective surgery activity shifted from acute Non-elective surgery activity shifted from acute Paediatrics shifted from acute Obstetrics shifted from acute Regular attendances shifted from acute Outpatients A&E shifted from acute Primary care	Mental health Learning disabilities Dental Optical Pharmacy Extended physiotherapy facilities (e.g. pool) Parking space Cafe/ restaurant
Community care	

Total size of polysystem calculation

Detailed further



Numbers of room needed for clinical activity calculation



Polysystem bottom-up model (1/6)

Cost Model - Polyclinic bottom up costing LEGEND AND STYLES 1. Legend and styles

les					
Legend:	Legend:				
Should not vary	Will vary				
Inputs to this model	Input from activity model				
LINKED values from elsewhere in the model	Inputs likely to change under moderate? radical				
Interim calculations	inputs that change with levers				
Notes	Main outputs of this model				

HIGH LEVEL MODEL SETTINGS AND OUTPUTS OF COST MODELS 2. High level model settings

London Population 2016/17	8,193,040
Set catchment population per Polyclinic	63,024
Number of Polyclinics in London	130

3. Outputs of Cost Model

Total cases at all Polyclinics per year	73,133,359
Cases per Polyclinic Centre per year	562,566
Total cost of all Polyclinics per year (£)	£ 4,746,460,872
Cost per Polyclinic per year (£)	£ 36,511,359
Unit cost of Poluclinic activity (\$)	\$ 64.90

ACTIVITY FIGURES (2016/17) 3. Activity provid<u>ed in Polyclinic setting, and cases</u>* per Polyclinic centre per year

	Service line	Total London Activity" 2016/17	% Activity" provided in Polyclinics	Total Activity" at all Polyclinics	Activity to PC-Cases" conversion factor	Total PC- Cases" at all Polyclinics per year	PC-Cases" per Polyclinic Centre per year
	Unitr	Acutospolls, attendanc	×	Acutospelle, attendance	Carer" / acute activity	PC-Carer*	PC-Carer
Elective Medicine	- Complex	49,677	Cardina and the second		1.0		
	- Non complex	403,379	23%	93,124	1.0	93,124	716
	- Long term conditions	7,010	Local Street of the second	2	1.0		1
	- Under 17	19,172	10%	1,884	1.0	1,884	14
Non elective	- Complex	60,991	A design of the second se		4.0		· · · · · ·
Medicine	- Non complex	284,235	11%	31,266	2.0	62,532	481
	- Long term conditions	46,355	20%	37,806	4.0	151,224	1,163
	- Under 17	8,428	4%	363	2.0	726	6
Elective Surgery	- Complex	185,340	terretin - en d	-	1.0		•
	- High throughput	408,553		· · · ·	1.0	•	•
	Minor procedures	85,434	59%	50,406	1.0	50,406	388
	- Under 17	57,380	-		1.0		
Von elective Surgery	- Complex	34.057	And		1.0		
	- Non complex	157,463	and the second s		2.0		
	- Minor procedures	2,737	100%	2,737	1.0	2.737	21
	- Under 17	14,004	4%	543	2.0	1,086	8
	- Paediatrics	75,673	7%	5,001	2.0	10,002	77
	- Neonatology	71	and the second second		1.0	•	
	Obstetrics	273,571		•	1.0		
	SUBTOTAL - SPELLS (includes ALL service lines)	2,123,853	11%	223,131	1.7	373,722	2,875
	Regular attendances	205,993	32%	66,132	1.0	66,132	509
	Outpatients	9,738,051	112	3,992,601	1.0	3,992,601	30,712
	A&E	4,037,811	50%	2,018,906	1.0	2,018,906	15,530
	Community care	12,505,079	100%	12,505,079	1.0	12,505,079	96,193
	Primary care	54,176,919	100%	54,176,919	1.0	54,176,919	416,747
	Total	82,837,382	88%	72,982,768	1.0	73,133,359	562,566
	Notes	"Activity' refers to equivalent activity	n equivalent activit in Polyclinic Centi	ly at current setting (res	le.g. acute inpatien	(spells), PC-Case	s'refers to

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Polysystem bottom-up model (2/6)

		그는 것이 가는 것으로	Staff - 2 of to	tal clinical tim	e staff are req	wired, on avera	Facilities & Su	pplies	
	Service line	clinical time per case (hours)	GP	Consultant	Nurse Practitioner / Therapist	Staff Nurses	Time in consultation room (2)	clincal supplies & imaging (2)	(place b in calculat
Florebox Records	0	aila: Here	X	X	X	X	X:	X 1005	
Elective Medicine	- Complex	50%	10%	85%	5%	60%	100%	100%	
	- Non complex	50%	70%	10%	20%	602	100%	100%	
	- Long term conditions	50%	70%	10%	20%	60%	100%	100%	
	- Under 17	50%	80%	15%	5%	60%	100%	100%	-
Non elective	- Complex	50%	10%	85%	5%	60%	100%	100%	
Medicine	- Non complex	50%	70%	10%	20%	60%	100%	100%	
	- Long term conditions	50%	70%	10%	20%	60%	100%	100%	
	- Under 1/	50%	80%	15%	5%	60%	100%	100%	-
Elective Surgery	- Complex	50%	10%	85%	5%	60%	100%	100%	
	- High throughput	50%	70%	10%	20%	90%	100%	100%	-
	- Minor procedures	50%	70%	10%	20%	(5%	100%	100%	
	- Under 17	50%	80%	15%	5%	60%	100%	100%	-
Non elective	- Complex	50%	10%	85%	5%	60%	100%	100%	
Surgery	- Non complex	50%	70%	10%	20%	60%	100%	100%	
	- Minor procedures	50%	70%	10%	20%	75%	100%	100%	1.500
	- Under 17	50%	80%	15%	5%	60%	100%	100%	
	- Paediatrics	50%	80%	15%	5%	60%	100%	100%	1
	- Neonatology	50%	0%	0%	0%		100%	100%	-
	Obstetrics	50%	0%	0%	0%	1	100%	100%	-
	Regular attendances	50%	10%	10%	10%	70%	100%	100%	
	Outpatients	50%	10%	55%	37%	60%	100%	100%	
	A&E	25%	60%	0%	40%	60%	100%	100%	
	Community care	50%	0%	0%	66%	33%	100%	100%	
	Primary care	25%	60%	0%	40%		100%	100%	
5. Average clini	Notes	Total time per ca	se averaged over a	Il cases; & stall tin	ne required = total .	stall time required	I number of cases		1
5. Average clini	Notes	Total time per ca type and facilities Staff - averge	clinical time p	ll cases; & stall tin er case (hours	ne required = total	Facilities & Su	/ number of cases	Overheade	1
5. A v eraqe clini	Notes	Total time por ca type and facilities Staff - averge	se anoraged over a	<i>ll cases; & stall tin</i> er case (bours Nurse Practitioner	ne required = total	Facilities & Su Time in consultation room per	/number of coses opplies Consemption of clinical sepply &	Overheads (place holder in]
5. Average clini	Notes ical time per case by staff Service line	Total time per ca type and facilities Staff - averge GP	clinical time p Consultant	<i>Il cases; & stall tin</i> er case (bours Nurse Practitioner / Therapist	se required = total Staff Nurse	Facilities & St Facilities & St Time in consultation room per case (hours)	/number of cases pplies Consumption of clinical supply & imaging units	Overheads (place holder in calculations)	
5. Average clini	Notes ical time per case by staff Service line	Total time per ca type and facilities Staff - averge GP	clinical time p Consultant	<i>Il coses; it stall tin</i> er case (bours Nurse Practitioner <i>I</i> Therapist Rum	se required = total	Facilities & St Facilities & St Time in consultation room per case [hours] Hurr	/number of cases pplies Consumption of clinical supply & imaging units United	Overheads (place holder in calculations) Hum	
5. Average clini Elective Medicine	Notes Ceal time per case by staff Service line - Complex	Total time per ca type and facilities Staff - averge GP sile: Hurri 0.1	clinical time p Consultant 0.4	<i>Il cases; i'stall din</i> er case [bours Nurse Practitioner <i>I</i> Therapist Hum 0.0	se required = total	Facilities & Si Time in consultation room per case (hours) Huns 0.5	/number of cases upplies Coassumption of clinical supply & imaging units United 36.6	Overheads (place holder in calculations) Kuy 0.5	
5. Average clini Elective Medicine	Notes Ceal time per case by staff Service line - Complex - Non complex	Total time per ca type and facilities Staff - averge GP -:11-: R 0,1 0,4	clinical time p Consultant 0.4 0.4	Il coses; i'stall tin er cose (bours Nurse Proctitioner / Theropist 0.0 0.1	staff Nurse	Facilities & Statistics & Statistics & Statistics & Statistics room per case (hours) Harrow 0.5	/number of cases pplies Consemption of clinical supply & imaging units Unit/or 36.6 25.3	Overheads (place bolder in calculations) Hum 0.5 0.5	
5. Average clini Elective Medicine	Notes Service line - Complex - Non complex - Long term conditions	Total time per ca. type and facilities Staff - averge GP cite: Remi 0.1 0.4 0.4	clinical time p Consultant 0.4 0.1 0.1	Il cases; i' stall din er case (bours Nurse Practitioner / Therapist u 0.0 0.1 0.1	Staff Nurse 0.3 0.3 0.3 0.3	Facilities & Si Time in consultation room per case (hours) 0.5 0.5 0.5	/number of cases pplies Consumption of clinical supply & units United 38.6 25.8 28.6	Overheads (place bolder in calculations) 80.5 0.5 0.5	
5. Average clini Elective Medicine	Notes Col time per case by staff Service line - Complex - Non complex - Long term conditions - Under 17	Total time per ca. type and facilities Staff - averge GP .:11:: H 0.1 0.4 0.4 0.4	clinical time p Consultant 0.4 0.1 0.1 0.1	Il cases; i' stall din er case [bours Nurse Practitioner / Therapist u 0.0 0.1 0.1 0.0	Staff Hurse 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Si Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5	/number of cases pplies Consumption of clinical supply & United 36.6 25.3 28.6 25.3	Overheads (place bolder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine	Notes Cal time per case by staff Service line - Complex - Non complex - Non complex - Long term conditions - Under 17 - Complex	Total time per ca type and facilities Staff - averge GP oile: Rund 0.1 0.4 0.4 0.4 0.4 0.4 0.1 0.1 0.4	clinical time p Consultant 0.4 0.4 0.1 0.1 0.4	Il cases; i'stall din er case [bours Nurse Practitioner / Therapist 0.0 0.0 0.1 0.1 0.0 0.0 0.0	Staff Herse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Si Time in consultation room per case (hours) Num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Inumber of cases Consumption of clinical supply & inaging units United 36.6 25.9 28.6 25.9 13.6	Overheads (place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine	Notes Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex	Total time per ca. type and facilities Staff - averge GP cile: Non 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant 9.4 0.4 0.1 0.1 0.1 0.4 0.4 0.4 0.4 0.4	Il coses; i'stall din er cose [bours Nurse Proctitioner / Theropist 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Hurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Staff time required Facilities & Staff Time in consultation room per case (hours) Num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	/number of cases consumption of clinical supply & imaging units 0.11/1 36.6 25.9 28.6 25.9 13.6 15.6	Overheads (place bolder is calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine	Notes Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Non complex - Long term conditions	Total time per ca. type and facilities Staff - averge GP cite: R 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant 0.4 0.1 0.1 0.4 0.1 0.1 0.1 0.1	I cases; i stall din er case [bours Practitioner / Therapist 8 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse 	Facilities & So Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Anumber of cases consumption of clinical supply & inaging units United 25.8 25.8 13.6 15.6 11.6	Overheads (place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
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5. Average clini Elective Medicine Von elective Medicine Elective Surgery	Notes Col time per case by staff Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Under 17 - Complex	Total time per ca type and facilities Staff - averge GP cite: Receipt 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant 0.4 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.4 0.1 0.4 0.1 0.4	# cases; i'stall din er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Hurse Staff Hurse No.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0	Facilities & Si Time in consultation room per case (hours) Num 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Anumber of cases pplies Consemption of clinical supply & imaging units Unitstan 28.6 25.9 13.6 15.6 11.6 15.6 36.6	Overheads (place holder in calculations) No. 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.	
5. Average clini Elective Medicine Von elective Medicine Elective Surgery	Notes Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput	Total time per ca. type and facilities Staff - averge GP cite: Remin 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; it stall dim er case [bours Nurse Practitioner / Therapist % 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse Nurse Staff Nurse Nurs	staff time required Facilities & Sr Time in consultation room per 0.5	/number of cases Consumption of clinical supply & 0.11/1 36.6 25.9 28.6 25.9 13.6 15.6 11.6 35.6 28.5 28.5	Overheads (place bolder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine	Notes Coll time per case by staff Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures	Total time per ca. type and facilities Staff - averge GP cite: u 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant 0.4 0.1 0.1 0.4 0.1 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.1 0.4 0.1 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.4 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	// cases; i' stall din er case [bours Nurse Practitioner / Therapist u 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Hurse No. 3 Staff Nurse N 0.3 0.3 0.3 0.3 0.3 0.3 0.3	stall time required Facilities & Si Time in consultation room per Burnet 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	/number of cases pplies Consumption of clinical supply & inaging units U.it/con- 25.3 28.6 25.3 28.6 25.3 19.6 15.6 15.6 25.5 28	Overheads (place bolder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Vledicine Elective Surgery	Notes Cal time per case by staff Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Long term conditions - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17	Total time per ca type and facilities Staff - averge GP office 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant Rue 0.4 0.4 0.1 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	// cases; i' stall din er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse Staff Nurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	stall time required Facilities & Si Time in consultation room per case (bours) Nors 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	/number of cases Coasemption of clinical supply & inaging units Unitedent 36.6 25.3 28.6 13.6 15.6 15.6 36.6 28.5 28.5 28.5	Overheads (place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine Elective Surgery Jon elective	Notes Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Under 17 - Complex	Total time per ca. type and facilities Staff - averge GP cite: Num 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant 0.4 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' stal/ din er case [bours Nurse Practitioner / Therapist u 0.0 0.0 0.0 0.0 0.0 0.0 0	Staff Nurse Number of the second sec	Facilities & So Time in consultation room per 0.5	/number of cases consumption of clinical supply & imaging units Unitrum 36.6 25.9 28.6 25.9 19.6 15.6 11.6 55.6 28.5	Overheads (place bolder is calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine Elective Surgery Von elective Burgery	Notes Service line Complex Non complex Non complex Under 17 Complex Under 17 Complex Under 17 Complex High throughput Minor procedures Under 17 Complex High throughput Non complex Under 17 Complex	Total time per ca type and facilities Staff - averge GP difference alle: u 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' stall din er case [bours Practitioner / Therapist 8 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse Staff Nurse	stall time required Facilities & Si Time in consultation room per OS 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	/number of cases cossumption of clinical supply & imaging units U.it/cost 25.9 25.9 25.9 19.6 15.6 11.6 15.6 26.5 28.5	Overheads (place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine Elective Surgery Von elective Surgery	Notes Service line - Complex - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - High throughput - Minor procedures - Non complex - Non complex	Total time per ca type and facilities Staff - averge GP cite: R 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant Runne 0.4 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.4 0.1 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.1 0.4 0.1 0.1 0.4 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; it stall din er case [bours Practitioner / Therapist 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Staff Hurse Staff Hurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	stall time required Facilities & Si Time in consultation room per 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	/number of cases consumption of clinical supply & imaging units Unitedant 25.9 28.6 25.9 13.6 15.6 25.5 28.5	Overheads (place bolder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Yedicine Elective Surgery Von elective Surgery	Notes Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Non complex - Non complex - Minor procedures - Under 17 - Complex - Minor procedures - Under 17	Total time per ca. type and facilities Staff - averge GP cile: None 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p clinical time p Conseltant 0.4 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' stal/ dim er case [bours Nurse Practitioner / Therapist // nurse 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Staff Hurse Staff Hurse No.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0	Facilities & So Time in consultation room per 0.5	/ number of cases Consumption of clinical supply & inaging units Unit from 25.9 23.6 25.9 23.6 15.6 11.6 15.6 26.5 26.	Overheads (place holder is calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine Elective Surgery Von elective Surgery	Notes Service line - Complex - Non complex - Non complex - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Non complex - Minor procedures - Under 17 - Paediatrics	Total time per ca type and facilities Staff - averge GP cite: R 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant 0.4 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' staff din er case [bours Practitioner / Therapist 8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Staff Nurse Staff Nurse No. 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.	stall time required Time in consultation room per case (hours) 0.5 0.5	/number of cases consumption of clinical supply & inaging units United 25.8 226.6 25.9 13.6 15.6 11.6 26.5 28.5	Overheads (place bolder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine Elective Surgery Jon elective Jurgery	Notes Service line Complex - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Under 17 - Complex - High throughput - High throughput - Minor procedures - Under 17 - Complex - Non complex - Non complex - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Paediatrics - Neonatology	Total time per ca type and facilities Staff - averge GP cile: u 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant 0.4 0.1 0.4 0.1 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' stall din er case [bours Practitioner / Therapist // Therapist // 1000 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Hurse Staff Nurse N 0.3 0.3 0.3 0.3 0.3 0.3 0.3	stall time required Facilities & Si Time in consultation room per ase (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	/number of cases pplies Coasumption of clinical supply & imaging units U.it/con- 25.3 28.6 25.3 28.6 25.3 28.6 15.6 26.5 28	Overheads (place bolder in calculations) 8400 05 05 05 05 05 05 05 05 05 05 05 05 0	
5. Average clini Elective Medicine Von elective Slective Surgery Von elective Surgery	Notes Service line Complex Com	Total time per ca. type and facilities Staff - averge GP cile: Receive 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant Consultant 0.4 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.1 0.4 0.4 0.1 0.4 0.4 0.4 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	// cases; i' stall din er case [bours Practitioner / Therapist // Ther	Staff Hurse Staff Hurse No.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0	Facilities & St Time in consultation room per 0.5	/ number of cases pplies Coasumption of clinical supply & inaging units United 25.9 28.6 25.9 28.6 15.6 15.6 15.6 28.5	Overheads (place bolder is calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Medicine Slective Surgery Von elective Surgery	Notes Service line Complex - Complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - Minor procedures - Under 17 - Complex - Non complex - Non complex - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Paediatrics - Neonatology Obstetrics Regular attendances	Total time per ca. type and facilities Staff - averge GP GP cite: R 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant Consultant 0.4 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' stall din er case [bours Practitioner / Therapist // Ther	Staff Nurse Staff Nurse Num 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	staff time required Facilities & Sr Time in consultation room per 0.5 <td>/ number of cases Cossumption of clinical supply & 138.6 25.9 28.6 25.9 13.6 15.6 11.6 15.6 28.5</td> <td>Overheads (place bolder in calcelations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5</td> <td></td>	/ number of cases Cossumption of clinical supply & 138.6 25.9 28.6 25.9 13.6 15.6 11.6 15.6 28.5	Overheads (place bolder in calcelations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Vedicine Elective Surgery Non elective Purgery	Notes Service line Complex Complex Complex Complex Complex Complex Under 17 Complex Complex Under 17 Complex Co	Total time per ca type and facilities Staff - averge GP dil: 0.1 0.4 0.4	clinical time p Conseltant 0.4 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' stall din er case [bours Practitioner / Therapist u 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse Staff Nurse	stall time required Facilities & Si Time in consultation room per Consultation 0.5 0.5	/number of cases consumption of clinical supply & imaging units U.it/ 25.9 25.9 25.9 25.9 25.9 13.6 15.6 26.5 26.5 28.5	Overheads (place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Slective Surgery Von elective	Notes Service line Complex - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Non complex -	Total time per ca. type and facilities Staff - averge GP cile: Rem 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.1 0.2 0.2	clinical time p Conseltant Rue 0.4 0.4 0.1 0.1 0.4 0.1 0.1 0.4 0.1 0.4 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' stall din er case [bours Practitioner / Therapist 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Staff Hurse Staff Hurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	stall time required Facilities & Si Time in consultation room per 0.5 0.5	/number of cases consumption of clinical supply & imaging units Unitedant 25.9 28.6 25.9 13.6 25.9 13.6 15.6 26.5 28.5	Overbeads (place bolder is calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
5. Average clini Elective Medicine Von elective Vedicine Ilective Surgery Jon elective Surgery	Notes Service line Complex - Complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Non complex - Minor procedures - Under 17 - Paediatrics - Non complex - Minor procedures - Under 17 - Paediatrics - Non complex - Minor procedures - Under 17 - Paediatrics - Non complex - Minor procedures - Under 17 - Paediatrics - Non complex - Minor procedures - Under 17 - Paediatrics - Non complex - Minor procedures - Under 17 - Paediatrics - Non complex - Mon complex - Minor procedures - Under 17 - Paediatrics - Non complex - Mage - Community care	Total time per ca. type and facilities Staff - averge GP GP cite: Num 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.5 - - 0.1 0.1 0.1 0.2 - -	clinical time p Conseltant 0.4 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	// cases; i' staff din er case [bours Practitioner / Therapist // Ther	Staff Nurse Number of the second Staff Nurse Number of the second Number	staff time required Facilities & Sr Time in consultation room per 0.5 <td>/number of cases Consumption of clinical supply & 0.11/1 36.6 25.9 28.6 13.6 11.6 15.6 11.6 28.5 2</td> <td>Overheads (place bolder is calculations) 05 05 05 05 05 05 05 05 05 05 05 05 05</td> <td></td>	/number of cases Consumption of clinical supply & 0.11/1 36.6 25.9 28.6 13.6 11.6 15.6 11.6 28.5 2	Overheads (place bolder is calculations) 05 05 05 05 05 05 05 05 05 05 05 05 05	

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Polysystem bottom-up model (3/6)

		Staff - total c	linical time per	year (hours)	Facilities & Supplies			
	Service line	GP	Consultant	Nurse Practitioner / Therapist	Staff Nurse	Time in consultation room per gear (hours)	consumption of clinical supply & imaging units	Overheads (place holder in calculations)
Contract and the	Unitr:	Haurs	Haurz	Haurs	Have	Haurs	Unit	Hour
ective Medicine	- Complex					10 P		
	- Non complex	251	36	72	215	358	18,585	358
	- Long term conditions	·	· · · ·	•	• 1	• • •		•
	- Under 17	6	1	0	4	7	376	7
on elective	- Complex	11			S	· · · · ·		
ledicine	- Non complex	168	24	48	144	241	7,481	241
	 Long term conditions 	407	58	116	349	582	13,495	582
	- Under 17	2	0	0	-2	3	87	3
ective Surgery	- Complex	•	•	•		*c :	•	
	- High throughput	•	•					
	- Minor procedures	136	19	39	145	194	11,036	194
	- Under 17		· · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · ·			
on elective	- Complex		•	· · · · · · · · · · · · · · · · · · ·		2010 - Carlos Ca	•	
rgery	- Non complex		•	•		•		
	 Minor procedures 	7	1	2	8	11	565	11
	- Under 17	3	1	0	3	4	130	4
	- Paediatrics	31	6	2	23	38	962	38
	- Neonatology	· · · ·						
	Obstetrics							
	Regular attendances	25	25	25	178	254	33,097	254
	Outpatients	1,536	8,446	5,682	9,214	15,356	580,754	15,356
	A&E	2,330	11	1,553	2,330	3,883	192,429	3,883
	Community care			31,744	15,872	48,097	3,274,314	48,097
	Primary care	62,512	e i	41,675		104,187	13,368,793	104,187
	Total	67,414	8,618	80,958	28,486	173,214	17,502,104	173,214
	Notes							

7. Clinical hours per year

Staff, facilities & clinical supplies	Contracted hour	rs per gear, FTE	Es (hours)	% Clinical hours / contracted	Clinical hours per year
Unitr:	Hourstweek	Weekstyeer	Hourstyear	× Clinical	Hourstyser
GP	40	40	1,600	56%	896
Consultant	40	40	1,600	56%	896
Nurse Practitioner / Therapist	40	40	1,600	56%	896
Staff Nurses	40	40	1,600	56%	896
Consultation rooms	84	52	4,368	75%	3,276
Clinical supplies	1	1]	1	100%	1
Overheads	168	52	8,766	100%	8,766
Notes	FTEs = Full time equ	uivalents			X

8. Total number of staff, facilities & supplies requied per year

and the state of the second state of the	Staff FTEs				Facilities & Su	pplies			
Resource unit	GP	Consultant	Nurse Practitioner / Therapist	Staff Nurses	Consultation rooms**	Clinical supplies & imaging	Overheads	Notes	
Unitr:	variour	variow	variour	variow	variour	variew	variaw		
FTEs, facilities - unrounded	75.24	9.62	90.36	31.79	52.87	17,502,104.14	19.76	Overheads = Number of annuar	
Smallest possible unit	0.10	0.10	0.10	0.10	1.00 1	1.00	0.00	Smallest possible unit for the p	
FTEs, facilities - rounded up	75.30	9.70	90.40	31.80	53.00	17,502,105.00	19.76	Number of staff FCEs, consult.	
Cases / FTE, facilities*	7,471	57,997	6,223	17,691	10,614	0	NA	Total number of PC-Cases per	
Notes	FTEs = Full time particular staff ty	equivalents: "Ca. pe of facility is req	ses / FTE, facilitie quired for any serv	s' calculated for a vice line; "Consult	ll cases and servic ation rooms round	e lines, irrespectiv led at this stage, a	re of whether a ssuming		78

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Polysystem bottom-up model (5/6)

10d. Overhead costs per year i) Key values repeated from above 4,368 562,566 Opening hours / year (hours) Cases / year Hub & spoke integrated Notes Figures are repeated here auditing - are referred to it A&C Staff Receptionsist

Staff	Contracted hour	Staff / shift	FTE	Annual salary			Total cost			
Units:	Hourstweek	Weekstyear	Hourstyear	Staffishift		FTE		ffstaff		
A&C Staff	40	40 1	1,600	5		14	٤	60,000	£	840,000
Receptionsist	35	40	1,400	6		13	£	30,000	٤	570,000
Other1	- 1	- 1	-	•				-		-
Other2	-	- 1	-	- 1				- 🦲		-
Other3	- 1	- 1	-		-			- 🦉		-
Total	Charles and the second					33	£	42,727	£	1,410,000
Notes	Add support and adl	I support and administrative staff tupes as required								

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iii) Additional Non clinical areas

	Consultation room area	% of Consultation room area	Circulation area	Cost / sqm	Total cost
Unitr:	Sqm	×	Sqm	£/Sqm	ť
Circulation area	835	60%	501	٤ 315	٤ 157,843
Unitr:	Sam	2	Sqm	Cost / sqm	Total cost
Other non clinical area (office space, IT, etc.)	835	60%	501	٤ 315	£ 157,843
	Cases per opening hour	Area per case per	Area (Sqm)	Cost / Sqm	Total cost
Unitr:	Caresthour	Samtcarethour	Sam	f/Sqm	ť
Waiting area	129	1.5	193	£ 315	£ 60,883
Notes					

iv) Additional overhead costs dependent on number of cases, opening hours and per year

	Cost per unit	Total cost	Notes
Unitr:	tfunit	ť	
percase	£ 1.72	£ 967,614	Adjustment to match benchmark E4 I case total overhead cost (UK GP Practice)
per opening hour	-	-	
per year	-	•	
Total		£ 967,614	
Notes	Addional overhe	ad (and facilities)	costs on top of costs for consulation rooms, non clinical areas and non-clinical pay

v) Total annual overhead cost Total annual overhead cost £ 2,754,183

COST CALCULATION - OUTPUTS 10e. Total annu

l cost of Polyclinic centre	Sta	ff			_		Fac	ilities & Su	DD	lies		1		
Annual costs		GP	Consultant	Nurse Practitio 7 Therap	ner ist S	Staff Nurses	Cor	nsultation rooms"		Clinical supplies	Ove	erheads		Total
Unitr:		tiyoar	tiyoar		tlyoar:	tiyoar		tiyoar		tiyoar		tiyoar		tiyoar
Total annual costs	£	9,036,000	£ 1,164,000	£ 4,520	,000 2	1,272,000	ź	263,071	ź	17,502,104	ž	2,754,183	2	36,511,359
Notes								State of the second	-				-	

Polysystem bottom-up model (6/6)

11.	Total	annual	costs	atributed	to	service	lines

		Sta	ff					500		F	acilities & Su	ıpp	lies				
	Total Annual costs		GP	Co	onsultant	Pr 1	Nurse actitioner Therapist	S	Staff Nurses	c	consultation rooms"		Clinical supplies	Ove	rheads		Total
	Unitr:		ttypar		tiyoar	1	flyear	r!	tiyoar		fiyear		ttyear	-	tiyear	11.	tiyoar
Elective Medicine	- Complex			1	1.11	-	4	Г				_				1.1	1 ÷ 1
	- Non complex	ź	33,606	٤	4,838	ž	3,999	12	9,596	2	544	ź	18,585	٤	5,695	ž	76,863
	- Long term conditions	-				200		1	-			-				1.1	
	- Under 17	2	777	£	147	£	20	12	194	1.5	11	£	376	£	115	ź	1,640
Non elective	- Complex			1				1		1		-					
Medicine	- Non complex	2	22,566	٤	3,249	2	2,686	12	6,444	é	365	ž	7,481	ε	3.824	£	46,614
	- Long term conditions	£	54,572	٤	7.856	£	6,495	E	15.583	E	883	ź	13,495	ż	9,248	£	108,132
	- Under 17	2	299	٤	57	\$	8	1.5	75	1	4		87	÷	44	-	574
Elective Surgery	- Complex	-				-		-		-		-		-		-	
	- High throughput	-		-	4.1	-		1-		1	1	-		-	1	1.0	
	- Minor procedures	;	18,190	4	2.619	4	2 165	1	6.493		294	4	11.036	+	3.083	\$	43,880
	- Under 17	-	in in it	-		-	-	-		-		-	11,000	-	0,000	-	10,000
Non elective	- Complex	-		-	-	-		+		-		-	L/	-		-	
Surgeru	- Non complex	-		-				+		1		-	*	-		-	
	- Minor procedures	\$	988	4	14.2	\$	118	- 5	353	5	16	\$	565	-	167	*	2 349
	- Under 17	-	448	5	85	5	12	5	112	5	6	-	130	ş	66	+	859
	Paediatrics	1	4 125	1	779	-	107	1.5	1031	1	58	\$	962	÷	612	1	7.675
	- Neonatology	-		-		-		1		-		-		-		-	1.01.0
	Obstetrics	1		-		-		1	-	-		-		_		-	
	Regular attendances	ž	3,409	ź	3,436	£	1420	f	7.950	12	386	1	33,097	£	4.044	1	53,743
	Outpatients	£	205.831	2	1.140,794	2	317.222	1	411.421	12	23.323	ž	580,754	8	244.171	£	2.923.515
	A&E	2	312,242	-		٤	86,706	Ĩ	104.020	1.5	5.897	ž	192,429	£	61,734	1	763.028
	Community care					É	1,772,294	E	708,729	2	73,048	1	3.274.314	£	764,759	£	6.593,143
	Primary care	٤	8,378,947	100		E	2.326,749	1		E	158,235	£	13.368,793	£	1.656.619	ž	25,889,343
	Total	£	9,036,000	٤	1,164,000	٤	4.520,000	E	1.272.000	£	263.071	2	17,502,104	£	2,754,183	٤	36,511,359
	Notes					-				-	te	-	4.97		875		

12. Unit costs by service line

		Staff				Facilities & S	upplies		
	Total Annual costs	GP	Consultant	Nurse Practitioner / Therapist	Staff Nurses	Consultation rooms"	Clinical supplies	Overheads	Total
and the second	Unitr:	ticare	ticare	ticare	ticar	e ficare	ilcaro	ticars	t/car
Elective Medicine	- Complex		• 3						-
	- Non complex	ž 46.91	٤ 6.75	£ 5.58	£ 13.40	٤ 0.76	£ 25.94	£ 7.95	£ 107.30
	 Long term conditions 	1		-					Sec. 1
	- Under 17	£ 53.61	£ 10.13	٤ 1.40	£ 13.40	٤ 0.76	£ 25.94	٤ 7.95	£ 113.15
Non elective	- Complex	÷				-			1 22 251
Medicine	 Non complex 	£ 46.91	£ 6.75	٤ 5,58	£ 13,40	£ 0.76	£ 15.55	٤ 7.95	\$ 96.8
	 Long term conditions 	£ 46.91	£ 6.75	٤ 5.58	£ 13.40	£ 0.76	£ 11.60	٤ 7.95	E
	- Under 17	£ 53.61	£ 10.13	٤ 1.40	£ 13.40	٤ 0.76	£ 15.55	£ 7.95	102.80
Elective Surgery	- Complex	•	•	191	(+) .				1-5-0 × 00
	- High throughput	· · · · · · · · · · · · · · · · · · ·			2	1.000	4		
	 Minor procedures 	£ 46.91	£ 6.75	٤ 5.58	£ 16.74	£ 0.76	£ 28.46	٤ 7.95	2 113.17
	- Under 17	() ()			2		· · · · · · · · · · · · · · · · · · ·	·	1000
Non elective	- Complex	A					(iii)	- N.M.	
Surgery	- Non complex		1000 - 100 -				•		
	 Minor procedures 	£ 46.91	£ 6.75	£ 5.58	٤ 16.74	£ 0.76	£ 26.85	£ 7.95	£ 111.58
	- Under 17	£ 53.61	£ 10.13	٤ 1.40	٤ 13.40	٤ 0.76	٤ 15,55	£ 7.95	£ 102.80
	- Paediatrics	£ 53.61	£ 10.13	£ 1.40	٤ 13.40	£ 0.76	£ 12,50	٤ 7.95	2 99.75
	- Neonatology		1						700
	Obstetrics	-				-	19 .		the second second
	Regular attendances	٤ 6.70	£ 6.75	£ 2.79	٤ 15.63	£ 0.76	£ 65.06	£ 7.95	105.65
	Outpatients	£ 6.70	£ 37.14	£ 10.33	£ 13.40	£ 0.76	£ 18.91	£ 7.95	1. 95,19
	A&E	£ 20.11		£ 5.58	£ 6.70	£ 0.38	٤ 12.39	1 3.98	1 48.13
	Community care		· · · · · · · · · · · · · · · · · · ·	£ 18.42	٤ 7.37	£ 0.76	٤ 34,04	٤ 7.95	£ 68.54
	Primary care	£ 20.11		£ 5.58	0.0000-7433	£ 0.38	£ 32.08	£ 3.98	£ 62.12
	Total	£ 16.06	£ 2.07	£ 8.03	٤ 2.26	£ 0.47	£ 31.11	£ 4.90	£ £4.90
0	Percentage of total costs	25%	3%	12%	3%	0.72%	47.9%	7.5%	1005

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1 Assumes base case acute tariffs make 3.6% efficiency gains



1 Assumes base case acute tariffs make 3.6% efficiency gains



1 Assumes base case acute tariffs make 3.6% efficiency gains



1 Assumes no efficiency gains in base case moderate and radical



1 Radical case assume net tariff uplift 0%, moderate assumes 3.6% efficiency gain, no efficiency gain in base case

Modeling transition, setup costs and capital

2010/11 year example



Assumptions for capital expenditure, transition and set-up costs

Detailed facts/ assumptions provided

Base assumption	ns for capex, transition and double	running costs	'Radicalnes	s'of lever pull
Capital efficience	Type of polysystem		Core	Assume 100% 'hub and spoke' with
parameters	Hub & spokes	Consolidated	scenario	[15:75:10] new -built to refurbish to reuse ratio with base assumptions as listed in table
Space utilisati	ion 75%	75% (original HfL)		
Capex – New-built – Refurbish – Reuse	£3250 /m² £2100/m² £200/m²	£3500 /m² £2300/m² £200/m²	Aggressive scenario	Assume 100% 'hub and spoke' with [0:75:25] new-built to refurbish to
Annual cost o — New-built — Refurbish — Reuse	f space ¹ £380 /m ² £260/m ² £85/m ²	£400 /m² £290/m² £84/m²		Uses base assumptions with the follow ing changes — 80% space utilisation, — Set up costs transitioning from
Set-up costs	~£1.0m per polysystem	~£1.0mper polysystem		£1.0m today to £0.5m
Transition cos	ts 20% efficiency loss for 1 year + 30% residual acute activity for 1/2 year	20% efficiency loss for 1 year + 30% residual acute activity for 1/2 year		loss for 1/2 year + 15% residual acute activity for 1/2 year
Pace of implement	ntation			
Straight line	Acute: Included in tariff shifts Polysystems: 1) constant balance costs and transition costs transition	of new build to leasing, imple n achieved by 2016/17 in age	emented as per s gressive scenari	shift to low er cost settings; 2) set-up o
Front-end	Acute: Included in tariff shifts Polysystems: 1) all new builds com and transition costs transition achie	npleted first, then refurbishm eved by 2011/12 in aggressi	ents, as per shif ve scenario	t to low er cost settings; 2) set-up costs

SOURCE: HfL feasibility, Polyclinic plans, Redbridge PCT, Kingston PCT, Tower Hamlets PCT, Sutton & Merton PCT

Set-up costs are in the region of £1m per polysystem, with additional transition costs to be managed

£ million



In addition to the above transition costs, most PCTs will need to manage double running costs and ramp down at acute providers as they transfer over activity. For example, BHCH assumes that only 50% of OP activity will shift over in the first year. The acute provider and PCT will need to manage the cost base so no double running costs occur

1 Two years at £2m/year total or £400k/site

Source: Redbridge PCT, Sutton and Merton PCT, BHCH Annex V

Transition costs: commissioners will only cover initial inefficiencies in the polysystems as well as residual activities from the acute system

Costs assumed carried by the commissioner

- Lack of efficiency in polysystem at the start compared to expectations
 - 20% efficiency loss (modelled as 20% increase in polysystem unit cost) for 1 year in core scenario
 - Same inefficiency but for 6 months in aggressive scenario
 - Residual activity in acute setting due to patient self direction to hospital, wrong referral pathway (GP unaware of new polysystem pathway) or patient choice (prefer to go to hospital when some activity still provided there)

Occurs simultaneously to a lack of volume observed by the polysystem provider Total effect modelled as:

- 30% residual activity in acute cost setting for 6 months in core scenario
- 15% residual activity in acute cost setting for 6 months in aggressive scenario

Set up costs of £1m per polysystem in core sœnario, transitioning from £1m to £0.5m per polysystem in aggressive scenario

	Core	Aggressive
A	£ 1,040m	£ 420m
B	£ 165m ¹	£ 150m ¹
С	£ 130m	£ 95-110m
	£ 1 225m	£ 665 680m

Other costs^{2,3} in acute and primary care should primarily be carried by providers; but a portion of those costs might be paid by commissioners to providers as an incentive to initiate change and increase productivity

2 Costs assumed carried by acute trust: Residual costs in admin (15% of total acute trusts costs), non-clinical costs (4%) and space (11%) that do not scale down completely as activity moves – estimates of those costs are £210m for admin (assuming 75% admin residual cost), £75m for non-clinical costs (assuming 100% residual costs) and £210m for space (assuming 100% residual costs), for a total of £0.5bn. Those costs are part of the semi-fixed costs the Trusts needs to eliminate (as covered in the implications for the acute sector section)

3 Additional costs in primary/community care: Residual costs due to failure to dispose of estate for those practices moving into a polysystem hub or consolidating into a larger poly system spoke – assuming 50% of primary care practices can not dispose of their previous estates, those costs amount to ~£140m

4 In real terms (net of inflation i.e., excluding inflation), 2007/8 numbers

SOURCE team analysis

A

В

C

¹ The residual activity costs are similar for the aggressive scenario than for the core scenario as a larger proportion of activity shifts from the acute setting into the polysystem delivery model in the aggressive case

Transition costs: Moving to affordability will cumulatively require £0.7-**1.3bn** depending on implementation strategy (excluding capital costs)



1 In real terms (net of inflation i.e., excluding inflation), 2007/8 numbers

2 Transition costs modeled based on % of costs that will be duplicated and might need reimbursements by commissioner to compensate. For example, in acute in year polysystem is opened, 50% of savings are foregone (20% due to admin, 10% to space and 20% to clinical staff) in Core case, faling to 25% in Aggressive case (which assumes faster transfer of staff with less double running). See backup for more detail.

3 Set-up costs assumed to be £1m/polysystem (core), falling to £500k after 2011/12 (aggressive)

SOURCE: GLA demographic forecast, HES data, HAS data, reference costs, HfL growth assumptions; Q research; Monitor tariff guidance ; current polyclinic plans; acute / non-acute provider cost breakdowns for 20078

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ILLUSTRATIVE

Saving £2.4bn in acute productivity is possible but challenging

Aggressive

Acu	te spend egory ¹	Example source of savings	Acute costs, 16/17 £bn ²	Saving³ %	Potential acute saving £m
1	Nurses	Moving to best-in-dass nurse productivity and spend levels	1.9	21–37	703
2	Doctors	Moving to best-in-dass Doctor productivity and spend levels	1.6	9-43	688
3	Drugs and devices	Reducing drugs cost to best-in-class — Reduction in branded drug price — Variability in prescribing — Increase in generic prescribing	1.3	22-35	455
4	Inpatient beds ³	Reduction in excess beddays, case-mix adjusted ALOS and increase in daycase rate to best in dass relative to peers	Savings o nurse and costs	captured in d overhead	o
5	OP	Reduction of DNA rates to release appointments for new activity/capacity reduction	1.6	0.5-4	64
6	Overheads⁵	Benchmarking suggests significant savings potential in corporate overheads (e.g. premises, depreciation, establishment, supplies & services, admin/managers/ maintenance staff)	2.7	34-42	996
			£9,1bn	~18-32%	£1.6bn £2.9bn
Notat Adjus Poten Assur	exhaustive list. Ad ted for underlying b tial savings incorpo ned at £200 saving	ditional savings may be made from imaging, patholog yand theatres. base case activity growth and cost inflation to 2016/17 brate studies from a range of sources, from individual acute London Trusts to Nation s/bed day and 75% bed utilisation	nal benchmarking of L	ondon as a whole	Some savings will be netted against losses from excess bed day income
OURC	E: Laing and Buiss	itysnitts, realising all overhead savings would require site rationalisation on 2007/8, NHS Handbook 2007/8, National NHS productivity study, productivity ar	nalysis of an acute Lo	ndon provider	93



Source: Dr Foster, Acute London Provider, Department of Health benchmarking, team analysis

94



Source: Wards observation

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Nurse productivity: An acute provider could save between £12.6m and £54m by reviewing nursing levels



WTE nurses per bed





Within London, nurse utilisation KPIs imply below average performance compared to rest of UK

London ¹	
National	

Nurse FTE / Bed, 2007-08, #



Nurse salary / Nurse FTE, 2007-08, £'000





Doctor productivity – 9-14% of acute doctor spend can be saved if 50-80% of the potential improvement of stepping up to the median is achieved



¹Top of range: bottom performers stepping up to 80% of the median (e.g., for doctors from 159 to 195). Bottom of the range: bottom performers step up to 50% of the median (e.g., for doctors from 159 to 182)

2 Consultant productivity: Benchmarking income per consultant can identify further productivity enhancements

Income net of drug costs per consultant WTE 2007/08 £m



Although London acute providers on average generate more income per FTE, there is still scope to improve London¹

Income / Nurse FTE, £'000, 2007-08



Income (less drug costs) / Consultant FTE, 2007-08, £'000



National



12 Acute providers – Variability of sickness rate highlights opportunities for increase staff productivity

Sickness rate¹ 2005, Percent



1 Time lost through absence as percent of total staff type excludes maternity leaves, carers leave and periods of absence agreed

Note: GPs and their staff not included in these figures Source: NHS Sickness Absence Survey 2005

NATIONAL

Orugs and Devices: Three levers have helped others to reduce drugs spend by ~10%

	Levers	Description	ement practices	im pact, %
Purchasing power	Competitive tenders and price negotiations Purchasing consortia Parallel imports	Run tender exercises on drug classes we therapeutic or generic alternatives Leverage increased buying power of pur consortia Capture the low est possible prices from drug trade while guaranteeing supply ar	vith several Irchasing I cross border Ind quality	Up to 3-5
Demand changes	Control of therapeutic creep Therapeutic substitution Generic substitution IV to oral sw itches Enforcement of policies for TTA* and outpatient drugs	Ensure that drugs are used within guide Switch to most cost-effective product in with several therapeutic alternatives Switch to most cost-effective generic alt Optimise intravenous vs. oral delivery re Enforce compliance with policies for TT outpatient prescriptions	lines drug classes ternative outes A* and	Up to 3-5
Process changes	Income control for drugs with special reimbursement Waste reduction Optimised distribution channels Improve order-to-payment process	Ensure full reimbursement for drugs tha specifically charged for (e.g., improved Optimise use of patients' drugs and avo Optimise use of home-delivery options a dispensing of drugs in community pharm Ensure full contract compliance and avo overpayment for drugs	it can be coding) id w aste and nacies bid	Up to 1-3

3 Drugs and Devices: Reducing drugs costs to best in class could yield savings of £17-40m

Drugs Clinical supplies

Drugs and clinical supplies cost, as a % of income, 2007/08





Within London, acute providers proportionally spend more on drugs and clinical supplies than their rest of UK counterparts



Drug and clinical supplies as share of total income, 2007-08, %



Drug cost as share of total expenditure, 2007-08, m²



3 Drug spend – Potential savings of £1.2–1.8b nationally through NATIONAL pulling different price and volume levers

£million, 2008/09. Drugs spend



SOURCE: Office of Fair Trade - Financial Hows Relevant to Medicines, DH - PPRS 2009; Laing & Buisson NHS Financial Report, Espicom, Euro Observer 2008, DHL website



Orug spend – PPRS 2009 agreement expected to deliver savings of

Orug spend – After the recently negotiated PPRS scheme, the U.K. branded drugs prices would be more aligned with the rest of Europe



Source: OFT Report on PPRS February 2007, team analysis
3 PCTs' prescribing costs – Potential savings of £0.4-0.6bn nationally, if PCTs achieve the median or 80% of the potential of stepping down to bottom quartile



108

3 Acute providers – potential to increase CT throughput by 50-100%

Number of CT scans per machine per hour of operation. 2006

NATIONAL





3 Pathology: Moving to a 24 hr shift pattern could release £2.6m annually

SANITISED EXAMPLE

Considerations defining assessment of opportunity

- Demand for out of hours services currently met by existing staff
- Replacing existing out of hours arrangements with 24 staffing cycle unlikely to require employment of new scientists or to free capacity
- Under Agenda for Change guidelines, staff working night shifts would still be entitled to 33% premium pay
- Optimal delivery of 24 hour service would require employment of sample reception staff to maximise productivity of scientists

Maximum opportunity of £ 2.6 m, p.a.



3 Pathology: The potential financial opportunity for Autolab utilisation is £1m

£ (000)



¹ Assumes xx of band 7 dinical chemists could be replaced by band 4 staff, and XX of band 8 haematologists replaced by band 6 staff

2 Assumed that 24 hour service could be effectively provided with addition of 1 additional sample receptionist at C&W, SMH and HH; 3 at Cx

³ Assumes x% increase in monthly auto transport (not applied to bike couriers)

⁴ Assumes X new staff (band 4 cc, band 6 haem) and reagent charge calculated by applying average reagent cost per order to incremental orders with X% markup to capture plastics, processing and other expenses

Source: Team analysis

Imaging: Absorbing outsourced MRI scans would save £1m



1 Assumes £100-200 per outsourced scan

Source: Team analysis



Potential improvement if PCTs step down to median or 80% of the top quartile in the number of diagnostics per 1,000 weighted population



Source: Department of Health Diagnostic Waiting List Returns; DH Exposition book 07/08



á s

ALOS has improved significantly in London and NEL — ALOS - NEL but is not yet at Upper quartile levels — - ALOS - UQ



ALOS - London



Although London acute provider DOSA is broadly in line with national figures, EBD's are higher London¹

National

Day of surgery admission (DOSA), %



Excess bed days (EBD) as share of total bed days, %



Achieving productivity gains in ALOS and implementing HfL will substantially change capacity requirements in the acute sector

Change in number of beds from 2007/8 to 20016/17 across London, versus 2007/8 current bed numbers¹





Keylevers

	Objective	Action	Analysis	Rationale
	Increase	Ensure all theatre slots are booked and reduce cancellations and DNAs	Overall theatre efficiency and cancellations	 Additional capacity could bring in additional income
	patients p.a.	Increase number of operating sessions per day and extend operating days] .	
Operations effectiveness	Reduce time per patient	Increase session time utilisation Start sessions on time Avoid early finishes	Minutes wasted during sessions	 Especially with specialties with a short time per case
		Reduce emergency readmissions within 28 days	Peer comparison of emergency readmissions	 Key quality indicator used by commissioners
	Reduce cost per time unit	Reduce clinical staff costs Improve clinical staff mix Reduce number of staff		
		Shift procedures from day care to procedure rooms		

4 Theatres: Improving utilisation across sites could release 4.5-6.5 theatre equivalents

•	Hours	Session equivalents ³	Theatre equivalents ³	Costs⁴	Cost savings opportunity, £m
Late starts	6000 ¹	1500	3.0	Pay cost per	3.6
	3000 ²	750	1.5	00000000.2402	1.8
Early	7000	1800	3.5	Paycost per	4.2
finishes	6000	1500	3.0	session: 2402	3.6
Overruns	3000	N/A	N/A	Nurse pay cost hour: 252 Anaesthetist pay cost per overrun session: 1128	0.9 – 1.3
Turnover time	TBD			To t	tal opportunity: 4.5-6.5 heatre equivalents or

1 Assumes start time is knife to skin

Source: Team analysis

- 2 Assumes start time is anaesthetic conduction
- 3 Assumes 4 hour session length, 2 sessions per theatre per day, 5 days per week, 50 weeks per y ear. Each theatre's capacity is roughly 500 sessions
- 4 Pay costs are for anaesthetists, nurses, assistants, admin only. No surgeon costs are included. No non-pay costs are included (e.g., supplies). For overruns, assumes anaesthetists receive session compensation for overruns > 2 hours



Outpatients

Key levers

Optimize the second second

NATIONAL

Impact of reducing ratio of OP follow-ups to new to the median or 80% of the potential of stepping down to the bottom quartile



1 Top of range: underperformers achieve 80% of the potential improvement of stepping down to bottom quartile. Bottom of the range: underperformers step down to the median

OUTPATIENTS Outpatients: Reducing DNA rates could release appointments for new activity or capacity reduction

Outpatient appointment cancellations overview, 2007/08



NATIONAL

6 Acute providers – Potential to increase usage of the clinical rooms in 80%¹ of the potential slots > 80%

Clinical room usage

50 - 80% < 50%

		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
A mo	Morning	75%	35%	53%	91%	34%	45%	10%
nic roo	Afternoon	80%	60%	85%	45%	56%	45%	15%
G	Evening	80%	60%	65%	45%	56%	45%	5%
Clinic room B	Morning	75%	35%	53%	91%	34%	45%	10%
	Afternoon	80%	60%	85%	45%	56%	45%	15%
	Evening	80%	60%	65%	45%	56%	45%	5%
nic room C	Morning	75%	35%	53%	91%	34%	45%	10%
	Afternoon	80%	60%	85%	45%	56%	45%	15%
CII	Evening	80%	60%	65%	45%	56%	45%	5%

1 Assumes target utilisation 80% or more

SOURCE: Team analysis

6 Supply chain/procurement: although significant savings already captured, there is still an opportunity estimated at £1.1–1.9b

£million. 2008/09. Clinical and non clinical supplies spend, excl. drugs and estates



SOURCE: National Audit Office – Summarised Accounts; NHS Purchasing and Supply Annual Report 2007/08, DH – Departmental Report 2008, team analysis

6 10% to 15% savings on external spend can be typically achieved [NATIONAL through a comprehensive procurement project

Percent savings based on 75 projects since 1997



Source: Teamanalysis PSM database

 The Supply Chain Excellence Programme aimed and captured £0.5bn savings out of £15bn spend, equivalent to 3% of the spend
 INATIONAL

	Initial savings estimate - 2004	New targeted savings - 2005	Final savings achieved – 2007/08
National Contracts Procurement ¹	240	407	240
Collaborative Procurement Hubs	270	326	270
Total	510	733	510

1 Includes expected savings from Wave 1 and Wave 2

Source: August 2005 - DH Commercial Directorate, NHS supply and procurement agency annual 127



Estates costs – Trusts' asset utilisation varies sixfold

NATIONAL





1 Acute and mental health trusts Source: Laing & Buisson financials; National Asset Register 2007; Team analysis

6 Estates optimisation – Potential savings of £0.4b if PCTs and trusts optimise utilisation of their estates

NATIONAL

£million. 2007/08. Estates costs



1 Calculated as trusts below median reaching median or 80% of top quartile value in sq.m. per bed or sq.m. per VVTE. Same assumption applied to capture savings from vacating currently unused space

2 Calculated to reach Condition B ("the asset is sound, operationally safe and exhibits only minor deterioration") and associated annual estates costs

6 Potential savings of £130-160*m from vacating current unoccupied space at providers' and PCTs estates...

NATIONAL

Opportunity to optimize space use if providers and PCTs vacate between 80-100% of the unoccupied space



* Range assumes 80% of maximum to maximum possible vacant space is disposed of

** Extremely conservative as costs generally taken to be £300-400/sq.m.

Source: NHS Information Centre: Estates Returns Information Collection 07/08; team analysis

6 ... and additional potential savings of £0.4bn from better use of providers' and PCTs' estates

NATIONAL

Opportunity to optimize space use if all providers step down to median or 80% of top quartile in use of sq.m./bed or sq.m/ WTE



* Extremel y conservative as costs generally taken to be £300-400/sq.m. Source: NHS Information Centre: Estates Returns Information Collection 07/08; team analysis

For example, there base across difference of floor area per bed Trust 1 Trust 1 Trust 2 Trust 3 Trust 4	e is significant variation in estate size relative to bed ent providers
	422
Trust 2	273
Trust 3	244
Trust 4	223
Trust 5	222
Trust 6	210
Trust 7	207
	199
Trust 8	

DURCE: DH Estates and Facilities returns, 2007/

Trust 12 Trust 13 Trust 14 Trust 15 Trust 16 Trust 17

_____142 _____137

>] 161 | 159

164

_____169 _____167

____ 176 _____171

Trust 10 Trust 11 Trust 9



6 PFI restructuring – renegotiating the interest charges of 80% of the PFI schemes by 2–3bp¹ could reduce financing cost by £0.1–0.2b. NATIONAL nationally

£ billion. 2008/09 – 2013/14



6 PFI restructuring – in the new context of low interest rates, worth exploring renegotiating the PFIs to lower the £1.3bn annual payments

NATIONAL



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Productivity improvements in the non-acute sector will come primary from staf productivity, the effects of scale and drug-related spend



A Primary care providers – A low-performing GP can spend less than 30% of their contracted hours actually seeing patients



Source: Interviews with PCT and practices; team analysis

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A Potential GP productivity improvement could be worth £0.4bn to £0.6bn, enabled through the polyclinic setting

Number of hours sent on direct patient care1



1 Not including patients seen whilst on-call; 2 Assumes current ratio of 17 admin staff per GP and 0.5 Nurse practitioner per GP; 3 Assumes average annual salaries in 2016/17 of £119k for GPs, 55k for nurse practitioners and 25k for admin

Source: Interviews with PCT and practices; Royal college of general practitioners; team analysis

A Current poor performance in patient facing time is also evidenced by performance in access



Source: The Information Centre for Healthcare and Social Care - GP Patient Access Surveys 2007/08, team analysis



1 Assumes average annual salaries in 2016/17 of £119k for GPs, 55k for nurse practitioners

Source:Interviews with PCT and practices; Royal college of general practitioners; team analysis

In Community care, there could be the potential to deliver same level of activity with 11–15% less staff

PCTEXAMPLE



Assuming that Staff pay represents 60% of community care costs², a 15% staff reduction would represent £150m savings

1 District nurses

Α

2 £1.65 bn in the 'do nothing' scenario by 2016/17

Source: 3-month sample of district nurses in provider arm of a PCT; team analysis

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And specifically in community care, one PCT has identified a set of initiatives to increase efficiencies of service line services by c. 15%

Efficiency improvement initiatives	Share of savings % of budget 08
Adjust skill-mix of Service line staff	8.0
2 Reduce administrative time by employing more admin. staff and intro of lean processes	3.3
3 Reduce management time of lower band staffs	1.0
(4) Streamline travel routes of clinical staff	(1.0)
5 Reduce data entry team once EMIS Web is fully functional	0.7
6 Replace night sitting agency staff with permanent staff	0.6
Total	14.6
This can represent an additional £225m savings	

Source: Team analysis


Source:Interviews with PCT and practices; Royal college of general practitioners; team analysis

A Reducing appointment times by 30% would provide an additional £570m savings

Additional 30% reduction in appointment time impact on	Savings (£m)
Primary care staff	£250 m
Community service staff	£300 m
Overheads	£20 m
Total	£570m

(mpact manuty?



Increasing space utilisation reduces the unit cost of attendance in primary and community care



Source: Polysystem model; team analysis

C Within drug spend, the PPRS 2009 agreement expected to deliver savings of 450m p.a. from 2010-11 onwards



Source:Office of Fair Trading: PPRS - An OFT evaluation survey; DH PPRS 2009; team analysis

With potential savings of £0.4-0.6bn in PCT's prescribing costs, if PCTs achieve the median or 80% of the potential of stepping down to bottom quartile



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The main sensitivities as a commissioner are how the acute tariff will be set externally, growth, and primary/community Potential expenditure in 2016/17 (addressive Hill: base case activity growth) integration into polysystems

Increase in spend Decrease in spend

(aggressive HfL; base case activity growth)

£12.1bn (vs £12.7bn funding low case)

Factors affecting	ctors affecting Aggressive case But if it Potentially because		Potentially because	Change in expenditu	
cost savings	assumes	was		£m	%
Overall growth in activity	4% CAGR, £12.1bn œst	5.5% CAGR, £13.1bn or 1.4% CAGR, £11.0bn	Supply-led demand increases plus demographic growth	-1,119 968 -9.	3 8.0
Acute growth rate	c. 0.9% CAGR growth	c. 3.5% CAGR	Higher demand for IP-related services, particularly A&E, OP	655	5
Non-acute growth rate	c. 4.9% CAGR growth	c. 6.1% CAGR	Higher latent demand as access improves	682	5
Reduction in acute tariff	3.7% overall CAGR efficiency requirement	1.8% overall CAGR	Future efficiency targets are reduced	1,1122	7
IP shift to lower cost settings	17% shift	8.5%	Only half activity shifts (e.g., rollout of	295	2.5
OP shift to lower cost settings	55% shift	27.5%	Only half activity shifts (e.g., rollout of only 1/2 polysystems)	87	0.7
A&E to lower cost settings	60% shift	30%	Only half activity shifts (e.g., rollout of only 1/2 polysystems)	19	0.2
1° integration into polysystem	100% integration	50%	Only half of 1° integrates with lower unit cost of polysystem	590	4.
CHS integration into polysystem	100% integration	50%	Only half of CHS integrates with lower unit cost of polysystem	490	4.
Removing duplication of services	EH, OH, MIU duplication removed	None	Inability to renegotiate contracts/ incentivise GPs to remove duplication	30	0.2
LTCs	40% of acute LTC, 10% complex, 30% non- complex prevented	Only half is prevented	Poor targeting or ineffective interventions for proportion of patients	103	0.9
Prevention	10% emergency medicine prevented	5% of emergency medicine prevented	Poor targeting or ineffective interventions for proportion of patients	58	0.5
Decommissioning In 2007/8 prices Calculated base on acute activ	7% all elective procedures, 30% OP, 10% A&E, 10- 15% diagnostics ity levels before activity shift in order	Only half is decommissioned to be comparable to £2.1bn tariff savi	Lack of strict adherence to protocols	225	1 .9

Key sensitivities behind the savings in non-acute setting are time/case, admin support levels and drug costs

BACK-UP

Potential spend in 2016/17 (aggressive HfL) £11.6bn

Footone offeeting	ctors affecting Aggressive case But if it Due to		(vs£12.1bn funding Change in sper	low case) nd ¹	
cost savings	assumes	was	Due to	£m	%
Time/case in polysystem	Acute/1%Comm/A&E 30/10/20/15 mins	Acute/19/Comm/A&E 40/15/25/20 mins	Staff spend 5-10 more minutes/case than estimated	625	
Admin staff	0.3 FTE/dinical staff (inc. GPs, nurses, consultants)	0.8 FTE/dinical staff (inc. GPs, nurses, consultants)	More admin staff are required despite consolidation of activity	356	3.1
Drug costs	15% reduction in new setting	0% reduction in new setting	Gains from switch to generics, prescribing less and new tariff not made	323	2.8
Staff mix	GP:ConsultantNurse OP (0%:40%:50%) Primary (50%:0%:50%)	GP:ConsultantNurse OP (10%:80%:10%) Primary (80%:0%:20%)	Nurses take on a lower proportion of work from doctors in the new settings	286	2.5
GP utilisation	66%	50%	GPs do not reach upper-quartile utilisation rates	220	1.9
Nurse utilisation	66%	50%	Nurses do not reach upper quartile utilisation rates	205	1.8
Diagnostics	Weighted av. unit cost £13	Weighted av. unit œst £45 (current tariff)	Polyclinic does not improve unit costs from current tariff	159	1.4
Supply costs in polyclinic		20% more expensive	Supply costs in 2016/17 are 20% higher in real terms	64	0.6
Space utilisation	80%	50%	Inefficient scheduling reduces utilisation	24	0.2
Delvelinie eize	1,520m ²	2,030m ²	Average size of polydinic is larger	15	0.1

Summary: the funding gap at 2016/17 for the different growth and PCT funding allocating assumptions (straight-line implementation)

##/##/## = "Status Quo"/ Core HfL scenario / Aggressive HfL scenario

Gap between (includes cap £b (positive n funding gap ²)	expenditure a pitalised operat umber = funding , 2016/2017 ^{3,4}	Associated cur transition costs £m	nulative capital and s 2007/8-2016/17		
	Lower case PCT funding allocation	Base case PCT funding allocation	Higher case PCT funding allocation	Total capital costs	Total transition costs
Lower range growth	-1.0/0.2/1.7	-0.3/1.0/2.4	0.3/1.6/3.0	0/430/260	0/950/520
Base case growth	-2.7/-1.2/0.5	-2.0/-0.5/1.3	-1.3/0.1/1.9	0/560/330	0/1,200/610
Higher range growth	-4.1/-2.4/-0.4	-3.4/-1.7/0.3	-2.8/-0.9/0.9	0/620/370	0/1,350/700

1 i.e., PCTs funding allocation > PCT's expenditure

2 i.e., PCTs funding allocation < PCT's expenditure

3 In real terms (net of inflation i.e., excluding inflation), 2007/8 numbers

4 Fifteen polysystems rolled out in year 16/17 straight-line implementation scenario (130 total)

SOURCE: GLA demographic forecast, HES data, HAS data, reference costs, HfL growth assumptions; Q research; Monitor tariff guidance; Laing & Buisson trust income and costs data for 2007/8; team analysis

Summary: the funding gap at 2016/17 for the different growth and PCT funding allocating assumptions (front-ended implementation)

##/##/## = "Status Quo"/ Core HfL scenario / Aggressive HfL scenario

2016/2017 ^{3,4}			£m	<u>5 2007/6-2016/17</u>
Lower case PCT funding allocation	Base case PCT funding allocation	Higher case PCT funding allocation	Total capital costs	Total transitio costs
-1.0/0.3/1.7	-0.3/1.0/2.4	0.3/1.7/3.1	0/430/260	0/950/520
-2.7/-1.1/0.6	-2.0/-0.4/1.3	-1.3/0.2/1.9	0/560/330	0/1,200/610
-4.1/-2.3/-0.4	-3.4/-1.6/0.3	-2.8/-0.9/1.0	0/620/370	0/1,350/700
	Lower case PCT funding allocation -1.0/0.3/1.7 -2.7/-1.1/0.6	Lower case PCT funding allocation Base case PCT funding allocation -1.0/0.3/1.7 -0.3/1.0/2.4 -2.7/-1.1/0.6 -2.0/-0.4/1.3 -4.1/-2.3/-0.4 -3.4/-1.6/0.3	Lower case PCT funding allocation Base case PCT funding allocation Higher case PCT funding allocation -1.0/0.3/1.7 -0.3/1.0/2.4 0.3/1.7/3.1 -2.7/-1.1/0.6 -2.0/-0.4/1.3 -1.3/0.2/1.9 -4.1/-2.3/-0.4 -3.4/-1.6/0.3 -2.8/-0.9/1.0	Lower case PCT funding allocation Base case PCT funding allocation Higher case PCT funding allocation Total capital costs -1.0/0.3/1.7 -0.3/1.0/2.4 0.3/1.7/3.1 Total capital costs -2.7/-1.1/0.6 -2.0/-0.4/1.3 -1.3/0.2/1.9 0/560/330 -4.1/-2.3/-0.4 -3.4/-1.6/0.3 -2.8/-0.9/1.0 0/620/370

guidance; Laing & Buisson trust income and costs data for 2007/8; team analysis

Summary: the funding gap at 2011/12 for the different growth and PCT funding allocating assumptions (straight-line implementation)

##/##/## = "Status Quo"/ Core HfL scenario / Aggressive HfL scenario

Gap between (includes cap £b (positive n funding gap ²),	expenditure a pitalised operat umber = funding 2011/2012 ^{3,4}	Associated cumulative capital and transition costs 2007/8-2011/12 £m			
	Lower case PCT funding allocation	Base case PCT funding allocation	Higher case PCT funding allocation	Total capital costs	Total transition costs
Lower range growth	-0.3/0.0/0.5	0.0/0.3/0.8	0.1/0.4/0.9	0/130/80	0/285/155
Base case growth	-0.7/-0.4 /0.1	-0.4/-01/ 0.5	-0.3/0.0/0.6	0/170/100	0/360/180
Higher range growth	-1.1/-0.8/-0.2	-0.7/-0.5/0.2	-0.6/-0.2/0.3	0/190/110	0/400/210

1 i.e., PCTs funding allocation > PCT's expenditure

2 i.e., PCTs funding allocation < PCT's expenditure

3 In real terms (net of inflation i.e., excluding inflation), 2007/8 numbers

4 Nineteen polysystems rolled out in year 11/12 straight-line implementation scenario (thirty-nine in total by 2011/12)

SOURCE: GLA demographic forecast, HES data, HAS data, reference costs, HfL growth assumptions; Q research; Monitor tariff guidance; Laing & Buisson trust income and costs data for 2007/8; team analysis

Summary: the funding gap at 2011/12 for the different growth and PCT funding allocating assumptions (front-ended implementation)

##/##/## = "Status Quo"/ Core HfL scenario / Aggressive HfL scenario

	Lower case PCT funding allocation	Base case PCT funding allocation	Higher case PCT funding allocation	Total capital costs	Total transition costs
Lower range growth	-0.3/-0.2/0.4	0.0/0.1/0.7	0.1/0.2/0.8	0/220/130	0/480/260
Base case growth	-0.7/-0.7/0.0	-0.4/-0.4/0.3	-0.3/-0.3/0.4	0/280/165	0/600/300
Higher range growth	-1.1/-1.0/-0.3	-0.7/-0.7/0.0	-0.6/-0.2/0.1	0/310/190	0/680/350

London commissioner expenditure from 2007/8 to 2016/17 including inflation, activity growth and HfL implementation

	2007/08 Expenditure	impact of activity growth only	Total 2016/17 expenditure from activity growth only	Impact from incremental cost i nflation	Total 2016/17 expenditure from incremental inflation and activity growth	Impact from tariff changes	Total 2016/17 expenditure from activity growth,increment al inflation and tariff reduction	2016/17 Radical HfL expenditure	2016/17 Moderate HfL exp en diture
Acute	5.7	0.7	6,5	0.9	7.4	-21	5.3	3,4	4.1
Primary care	2,2	1,2	3.4	0,5	3.9	0.0	3.9	2,7	3,7
Community	1.0	0,4	1,4	0.2	1.7	0.0	1.7	0,7	0,9
Other Non-acute (acute									
shifted to polysystem)	0.0	0,0	0,0	0,0	<u> </u>	0.0	0.0	<u> </u>	0.5
Mental Health	1.6	0.4	2.0	0.3	2.3	-0.4	<u>1.9</u>	<u>1.9</u>	1.9
Learning disabilities	0.3	0,1	0,4	0,1	0.5	0.0	0,5	0.5	0.5
Prescribing	0.0	0,0	0,0	0,0	0.0	0.0	0.0	0.0	0.0
Pharmacy	0.0	0,0	0,0	0,0	0.1	0.0	0.1	0.1	0.1
Dental	0.4	0.1	0.5	0.1	0.5	0.0	0.5	0.5	0.5
Optical	0.1	0,0	<u> </u>	0.0	<u> </u>	0.0	<u>i0.1</u>	0.1	<u> </u>
Tertiary and specialist	İ	1		1	1	Į	İ	İ	I
commissioning	0.0	0,0	0.0	0.0	0.1	0.0	0.1	0,1	0.1
Adjustment ASF vs RRL and				1	1	1			
MFF change 09/10	0.2	0.0	0.2	1.2	1.4	0.0	1.4	1.4	1.4
Total	11.5	3.0	14.5	3.2	17.8	-2.4	15.3	12.0	13.8

Activity Growth

Overall activity acute and non-acute: 1.4% (low), 4% (Base), 5.5% (high) CAGR Acute: 0.9% CAGR Non-Acute: 4.9% CAGR

Cost inflation

1.45% CAGR cost inflation assumed from 2007/8 to 2016/17 across all services and average of 3.65% CAGR efficiency requirement assumed from 2007/8 to 2016/17 in acute (2.4% 2008/09, 3% 2009/10, 3.5% 2010/11, 4% 2011/12 year-on-year to 2016/17) Average of 3.65% CAGR efficiency requirement assumed from 2007/8 to 2016/17 in acute (2.4% 2008/09, 3% 2009/10, 3.5% 2010/11, 4% 2011/12 year-on-year to 2016/17)

Forecasting

Mental health and Other costs are not modeled with detailed growth assumptions.

Mental health is scaled according to overall increase in acute and non-acute expenditure and is subject to efficiency requirements of reduced tariff. Other costs are scaled to overall increase in acute and non-acute expenditure but not subject to efficiency requirements of reduced tariff

SOURCE: GLAdemographic forecast, HESidata, HASidata, reference costs HfL growth assumptions, @ research; Monitor tairff guidance; Laing & Buisson trust income and costs data for 2007/8; team analysis



Savings required by 2017/18 and 2010/11 in different scenarios

2016/17	Netacute tariff reduction	Shift of acute activity to lower costsetting	LTC, Prevention, Decommissioning	Non -acute reduced unit costs in polysystem	Total
Core savngs	2.4	0.4	0.3	0.8	3.9
Radical savings	2.4	0.5	0.8	2.0	5.7

2010/11 straight- line implem entation	Netacute tariff reduction	Shift of acute activity to lower costsetting	LTC, Prevention, Decommissioning	Non -acute reduced unit costsin polysystem	Total
Core savngs	0.7	0.1	0.1	0.2	1.2
Radical savings	0.7	0.2	0.2	0.6	1.7

2010/11 front- ended implementation	Netacute tariff reduction	Shift of acute activity to lower cost setting	LTC, Prevention, Decommissioning	Non -acute reduced unit costs in polysystem	Total
Core savngs	1.2	i 0.2	i 0.2	i0.4	i 2.0
Radical savings	1.2	0.3	0.4	1.0	2.9

Polyclinics cost reconciliation

ltem	Change	Operating costs
Initial HfL polysystem		~ £20m
Number of polysystems	From 150 to 130, which implies larger catchment area and larger activity: +15% costs	~ £23m
Increased primary care activity	From 75% to 100% of primary care activity included in polysystem +£ 6 million per polysystem	~£29m
Increased community care activity	From 50% to 100% of community care activity included in polysystem +£ 4 million per polysystem	~ £33m
Decreased staff efficiency	From 75% to 55-75% +£ 3 million per polysystem	~£36m