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

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### 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	<b>Savings,</b> £m	Driver of savings				
		Decomm- issioning	Improved efficiency*	Shift out of acute	Improve m'ent of LTC**	
Inpatients	415	$\checkmark$		$\checkmark$	$\checkmark$	
Regular attenders	10			$\checkmark$		
Outpatients	193	✓				
A&E	110	$\checkmark$		$\checkmark$		
Community	330		✓			
Primary	415		✓			
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

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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



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

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### Current healthcare activity by service line, 2007/8

	Service lines	Activity 000's (Spells/attendances) Examples				
. 0.57		Complex	41	<ul> <li>PCI, hepato-biliary procedures</li> </ul>		
+H+C.	Elective medicine	Non complex	342 4658	<ul> <li>Neuropathies, sleep disorders, scoping, renal, had</li> </ul>	em	
T	Licour e mediome	Long-term conditions	65	<ul> <li>Planned admission for asthma, diabetes</li> </ul>		
		<ul> <li>Under17s</li> </ul>	17			
1		<ul> <li>Complex</li> </ul>	61	Acute MI, stroke		
In flettie	Non elective	Non complex	242 2491	DVT, pneumonia, pulmonary embolus		
001100	medicine	<ul> <li>Long-term conditions</li> </ul>	39 🜙 🚺	<ul> <li>Emergency admission for asthma, diabetes</li> </ul>		
		<ul> <li>Under 17s</li> </ul>	7			
47.000		<ul> <li>Complex</li> </ul>	164	<ul> <li>Major GI procedures, transplants, neurosurgery</li> </ul>		
911	Elective surgery	<ul> <li>High throughput</li> </ul>	364 (56)	🔊 Cataracts, arthroscopy, hernia		
De 14 T	Elective Surgery	<ul> <li>Minor procedures</li> </ul>	76 000	<ul> <li>Vasectomy, skin lesions</li> </ul>		
lecture		• Under17s	52			
		Complex	30	<ul> <li>Trauma, major GI procedures, burns</li> </ul>		
21 (100	Non elective surgery	Non complex	142 198	NO ENT, fractures		
21,000	Non elective surgery	<ul> <li>Minor procedures</li> </ul>	3 110	Minor skin proœdures		
		• Under17s	13			
	Obstetrics	>	231	<ul> <li>Normal delivery, assisted delivery, caesarian secti neonatal discharge</li> </ul>	tion,	
		Paediatrics	72	<ul> <li>Cystic fibrosis, neoplasms, epilepsy</li> </ul>		
	Paediatrics	<ul> <li>Neonatology</li> </ul>	0	<ul> <li>Neonates with major/minor diagnoses</li> </ul>		
-	Outpatient	>	9,025	New and follow up outpatient consultations		
-		• Major	1,423 21999	<ul> <li>Emergency admissions, trauma</li> </ul>		
	A&E	<ul> <li>Standard</li> <li>Minor</li> </ul>	575 5	Fractures     Minorillness and injuny		
	Community care	• Minor	1,820 8,889	<ul> <li>Minor illness and injury</li> <li>Health visitors, podiatrists, district nurses etc.</li> </ul>		
	Primary care	» (	34,554	GP and Nurse consultations		
		3	455400		2	
Source:	HES 2007/8; PCT CSPs 2007/8; Q research	2008; GLA; Team analysis	1 10			

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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

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

Source:

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

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

Hospital activity	Orig HfL residual forecast (CAGR%)			New residual base forecast (CAGR%)	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 Attendances, consultations, etc.	0%	0%	0%	1.0%	Increased based on input from NEL CRGs	0%	1%
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%
4&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%
<sup>o</sup> rimary 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

\*\* Lower number if walk-in centres are excluded, higher number if they are included

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

<sup>\*\*\*</sup> 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



### **O**riginal HfL activity settings and decommissioning

	specialist hospital	Elective centre %	Local hospital	Polyclinic %	Home %	(decommissioned) %	
Electivemedicine							
Complex	93		7				
Non-complex	29	4	43	23			
LTC <sup>1</sup>	50		50				
Under 17s	66	9	15	10	بالعالمات		
Non-elective medicine							
Complex	88		12				
Non-complex	16		73	11			
LTC <sup>1</sup>	17		63	20			
Under17s	83		13	4			
Elective surgery	50	10				7	
Complex High-throughput	52 10	40 85				7 5	
Minor procedures	10	32		59		8	
Under 17s	57	35		55		8	
Non-elective surgery							
Complex	100						
Non-complex	55		45				
Minor procedures				100			
Under 17s	84		12	4			
Paediatrics							
Paediatrics	72		22	7			
Neonatology	88		12				
Obstetrics	60		34		6		
Regular attenders	17		51	32			
Outpatients	13	13	13	(40)		(20)	
A&E	20		20	50		10)	
Community care				50	50		
Primary care				70	1		
-term condition, e.g., dia mes other 30% takes pl		tside of, but linked i	nto, polydinics	$\sim$		is no end	2
San States and States			A MARTINE	No. Contraction			
CE: HfL feasibility, Polyc	clinic plans, Redbridge	PCT, Kingston PCT	, Tower Hamlets F	PCT. Sutton &	Merton PC	T 39	

## • Rationale for activity distribution (1/3)

Service lines		Rationale
Elective medicine	Complex	<ul> <li>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 or activity in local setting</li> </ul>
	Non complex	<ul> <li>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</li> </ul>
	<ul> <li>Long-term conditions</li> </ul>	<ul> <li>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</li> </ul>
	• Under 17s	<ul> <li>Majority of care assumed to require major acute or specialist hospital; some opportunity to provide diagnostic procedures or minor interventions in local setting</li> </ul>
Non elective medicine	• Complex	<ul> <li>Vast majority of emergency complex medicine will require major acute infrastructure; some cases will be appropriate for local setting (e.g., stroke &gt; 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)</li> </ul>
	Non complex	<ul> <li>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 hospita admission could be dealt with in polysystems with good diagnostic and community infrastructure</li> </ul>
	Long-term conditions	<ul> <li>Majority of care assumed to require local hospital setting; shift to polyclinic driven by clinical evidence where available, or expert opinions; some conditions or patients with comorbidities assumed to require major acute hospital setting</li> </ul>

### • Rationale for activity distribution (2/3)

Service lines		Rationale
Elective surgery	Complex	<ul> <li>Majority of care delivered in major acute/specialist centres of excellence; 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</li> </ul>
	• High throughput	<ul> <li>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</li> </ul>
	Minor procedures	<ul> <li>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</li> </ul>
	• Under 17s	<ul> <li>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 or throat procedures</li> </ul>
	Complex	<ul> <li>All patients will be channelled to major acute setting</li> </ul>
Non elective surgery	Non complex	<ul> <li>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</li> </ul>
	Minor procedures	All emergency minor procedures would be dealt with in local hospitals
	• Under17s	<ul> <li>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 of in dedicated paediatric uppert case facilities</li> </ul>
		in dedicated paediatric urgent care facilities

# • Rationale for activity distribution (3/3)

Service lines		Rationale
Obstetrics	Deliveries	<ul> <li>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</li> </ul>
	Antenatal admissions	<ul> <li>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</li> </ul>
Paediatrics	Paediatrics	<ul> <li>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</li> </ul>
	Neonatology	<ul> <li>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</li> </ul>
Outpatients	? enderce? sources	<ul> <li>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</li> </ul>
Regular attendances		<ul> <li>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)</li> </ul>
A&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	assumed	<ul> <li>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</li> </ul>
Primary care	A	<ul> <li>It is assumed that <u>70%</u> of GPs work out of polydinic facilities with the remainder working in large practices networked to polydinics</li> <li>42</li> </ul>

### A

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

Real tariff change (against RPI<sup>1</sup>)

	<u>2008/9 – 2010/11</u>	2011/12 - 13/14	2014/15 - 17/18	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
	•	•	•	to fall from 2011/12 given 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

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										•		I	Fee for service
		GN	/IS/PN	1S		Ext. hours							Capitation
GP tariffs								0	utofh	ours			Capitation
Enhanœd service. Walk-in centre	7										1	1.1.1.	Payperuse
	1												
	ever pu	aying du			• • •xtende	ed hour	s and o	but of ho	ur fee	s betw	veen 6-	-8pm, w	Fee for service
<b>'Radicalness' of I</b> Core scenario Aggressive scenario	ever pu Stop pa ~£20m GPs pa	aying du across	Londo	n <sup>1</sup>									
scenario Aggressive scenario Pace of implemen	ever pu Stop pa ~£20m GPs pa	aying du across iid a fee	Londo forse	n <sup>1</sup> rvice a	at £50/	consul	tation <sup>2</sup> ,		al savi	ings o			ith total savings of

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

Aggressive 6-11% increase in efficiency (patient-facing Straight-line Implementation
officiency (nationt facing
follows the pace of shift to lower care setting
I 10-15% increase in efficiency (patient-facing time) Front-end: Same as straight-lin

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 deliver same level of activity or 10% above



#### 1 District nurses

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

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

PCTEXAMPLE

Efficiency improvement initiatives	Share of savings % of budget 08
1 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
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





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

Detailed facts/ assumptions provided

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
<ul> <li>Level of role substitution</li> </ul>	Original HfL assumptions amended for increased consultant/GP ratio in OP <sup>1</sup>	More role substitution from consultant/GP to nurses <sup>1</sup>	setting Front-end: Same as straight-line
<ul> <li>Time required per case</li> </ul>	Original HfL assumptions across all activities <sup>1</sup>	Reduction of consultation time by 33% in primary care	
Supplies/diagnostics			
<ul> <li>Prescribing costs</li> </ul>	Original HfL assumptions <sup>2</sup>	10% reduction for secondary care, 15% for primary care	
<ul><li>Supplies</li><li>Diagnostics</li></ul>	Original HfL assumptions <sup>2</sup> Updated HfL assumptions	Original HfL assumptions <sup>2</sup> 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 consultations managed by type of staff Changes from original Hfl

consultations	s ma	anag	ed by	typ	be of	staff				Nurs		Changest	rom original HfL
	<b>Time</b> Hour		d per care	GP %			Cons %	sultant			titioner/	AHP <sup>1</sup>	Staff nurse %
	HfL	Core	Aggr.	HfL	Core	Aggr.	HfL	Core	Aggr.	HfL	Core	Aggr.	All scenarios <sup>2</sup>
Elective medicine		1.1.1	191.71						1.1	1.2	Contra-		
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 <sup>1</sup>	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 <sup>1</sup>	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	-		-	-	3.0		-		-	
Obstetrics	0.50	Same	0.50	-	-		-	-	-	- 2	-	140	1
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	į,		-	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	1		-	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 polyclinics
4&E	50%	60%	implemented by 2011/12
Primary care	100%	100%	<ul> <li>65 polyclinics by 2011/12</li> <li>130 by 2016/17</li> </ul>
no new evidend		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 modalities<sup>1</sup>, %



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

Core (original HfL assumptions)	Aggressive (new considerations)	
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 consultations in the polyclinic)	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 term condition/complex health needs This is modelled by increasing non- elective medicine shift to polyclinics as follows: 10% complex, 30% non- complex and 40% LTC	Straight-line All levers implemented gradually up to 2016-17 Front-end: All levers reach 50% implementation by 2011/12 100% implementation by 2016/17
		(resources) Statt? 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 in acute unscheduled activity		Increase in PC consultations	Core references _ but needs right				
Condition	Intervention	Adm <sup>1</sup>	LOS	required to deliver LTC in London	Core references - but reeding				
Congestive heart failure	Multi-disciplinary managed care <sup>2</sup> Specialist nurse interventions Discharge planning and post discharge support	23-85% <sup>3</sup> 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 <sup>4</sup> 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)

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

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
0	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 b 2016/17
e forres.	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 <sup>1</sup> , 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 <sup>1</sup>	CHD prevalence <sup>5</sup> – 193,000 Cancer prevalence <sup>5</sup> – 58,000 (with hospital activity due to respiratory chemotherapies > 4,500)	None - all avoidable	Early deaths from smoking - 29,680 <sup>8</sup>	Passive smoking
Diet (5 a day) Physical activity	3,610,000 <sup>4</sup> (less than 5-a-day) 2,170,000 <sup>4</sup> (less than	Obesity adults <sup>7</sup> - 1,105,000 Obesity children <sup>7</sup> - 291,000 Co-morbidities: diabetes, hypertension, dus lipodaemia, breathless ness, s leep	None - all avoidable	More fruits & vegetables - 5,000 <sup>11</sup> Reduction of salt - 2,800 <sup>11</sup>	Cost of obesity at ~ £6bn for NHS <sup>11</sup>
	30 min acti- ر vity/ week)	apnoea, gall bladder disease			
CHD	193,000²	Hospital activity <sup>3</sup> due to hypertension <sup>6,9</sup> - 13,250 Hospital activity <sup>3</sup> due to	17,300 <sup>12</sup>	Early deaths due to heart disease and stroke – 5,150 <sup>13</sup>	Absolute number of early deaths
		CHD <sup>9,10</sup> -91,100		(deaths before age 75)	

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, ...)

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

B	Original	Other	models			C	D		
•	HfL (core)	S&M	Redbridge	NEL <sup>2</sup>		Aggressive (without LTC)	Aggressive (with LTC)	Agg. (with prevention)	
Elective medicine									
Complex	0	0	0	1		0	0	0	
Non-complex	23	11	27	14		23	23	23	
LTC <sup>1</sup>	0	0	36	3		0	0	0	
Under17s	10	17	Х	Х		10	10	10	
Non-elective medicine	0.522.52				1			20222222	
Complex	0	0	0	3	Α	0	10	20	
Non-complex	11	0	0	2		11	30	40	
LTC <sup>1</sup>	20	0	0	6		20	40	50	
Under17s	4	0	х	Х		4	4	4	
Electivesurgery					-7 [-				
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	Х	Х		0	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					-1[-				
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 <sup>3</sup>	55-70 <sup>3</sup>	55-70 <sup>3</sup>	
A&E	50	0	0	57		60-70 <sup>3</sup>	60-70 <sup>3</sup>	60-70 <sup>3</sup>	
Community care	1004	x	41	X		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

Service line	Core		Aggressive				
	% activity de- commiss <i>i</i> oning	Rationale	% activity de- commissioning	Rationale	Straight-line		
Elective surgery	7% 'complex', 5% 'high throughput', 8% '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	All levers implemented gradually up to 2016-17 Front-end: All levers reach 50% implementation by 2011/12		
Outpatients	20% of total activity <sup>1</sup> (original HfL assumption)	Est. proportion of unnecessary first and follow-up patient visits	30% of total activity <sup>2</sup>	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 the most cost-effective		
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 millions<sup>1</sup> across London (1/2)

		Reduction	, %	Potential savings. £m		
		Minimum	Maximum	Minimum	Maximum	
- lating he	Tonsillectomy	10	90	0.7	6.6	
elatively neffective	Spinal cord stimulation	0	50	0	<0.1	
terventions	Back pain – injection and fusion	20	90	0.5	2.4	
	Grommets (surgery for glue ear)	10	90	0.3	2.3	
	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	
tentially smetic	Inguinal, Umbilical and Femoral Hernias	25	50	3.1	6.2	
terventions	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	
	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 millions<sup>1</sup> across London (2/2)

	F	Reduction, %		Potential savings. £m		
	Ν	/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	
balance in mild 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 <i>l</i> stress incontinence (non-surgical)	5	25	<0.1	<0.1	
Effective interven- tions where cost	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	
be 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

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 Community care	Mental health Learning disabilities Dental Optical Pharmacy Extended physiotherapy facilities (e.g. pool) Parking space Cafe/ restaurant

### 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

Legend:	Legend:
Should not vary	Will varg
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 activitu [E]	£ 64.90

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

Unite: ditions	Acutozpollz, attendanc 49,677 403,378 7,010	23%	Acutospolls, attendance	Carer" / acute activity	v	
ditions	403,379 7,010	-			PC-Cares"	PC-Cares
ditions	7,010		· · · · · ·	1.0		
ditions		2.5%	93,124	1.0	93,124	716
		Local Strength of the		1.0	-	•
	19,172	10%	1,884	1.0	1,884	14
	60,991	A design of the second data is a second data in the second data in the second data is a second data in the second data in the second data is a second data in the second data in th		4.0		
	284,235	11%	31,266	2.0	62,532	481
ditions	46,355	20%	37,806	4.0	151,224	1,163
	8,428	4%	363	2.0	726	6
	185,340	terretin - en d	-	1.0		
Jt	408,553	State -	1	1.0		•
res	85,434	59%	50,406	1.0	50,406	388
	57,380			1.0	-	
	34,057	And	· · · ·	1.0		
	157,463	Contraction of the second		2.0		
res	2,737	100%	2,737	1.0	2,737	21
	14,004	4%	543	2.0	1,086	8
	75,673	7%	5,001	2.0	10,002	77
	71	and the second second		1.0		
	273,571	1922		1.0	- 1	•
SPELLS service lines)	2,123,853	11%	223,131	1.7	373,722	2,875
nces	205,993	32%	66,132	1.0	66,132	509
	9,738,051	112	3,992,601	1.0	3,392,601	30,712
	4,037,811	50%	2,018,906	1.0	2,018,906	15,530
•	12,505,079	100%	12,505,079	1.0	12,505,079	96,193
	54,176,919	100%	54,176,919	1.0	54,176,919	416,747
	82,837,382	88%	72,982,768	1.0	73,133,359	562,566
		4,037,811 12,505,079 54,176,919 82,837,382 "Xotivity" refers to	4,037,811 5052 12,505,079 10052 54,176,919 10052 82,837,382 8852 "Activity" refers to equivalent activity	4,037,811         50x         2,018,306           12,505,079         100x         12,505,079           54,176,919         100x         54,176,919           82,837,382         88x         72,982,768           "Activity refers to equivalent activity at current setting/	4.037,811         50x         2.018,306         1.0           12,505,073         100x         12,505,073         10           54,176,913         100x         54,176,313         10           82,837,382         88x         72,982,768         1.0           "Activity" refers to equivalent activity at current setting (e.g. acute inpatient)         10	4,037,811         50%         2,018,306         1.0         2,018,306           12,505,079         100%         12,505,079         1.0         12,505,079           54,176,319         100%         54,176,319         1.0         54,176,319

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## Polysystem bottom-up model (2/6)

1.			Staff - 2 of to	otal clinical tim		sired, on avera			
	Service line	clinical time per case (hours)	GP	Consultant	Nurse Practitioner / Therapist	Staff Nurses	Time in consultation room (2)		(place hold in calculation
Elective Medicine	- Complex		X	x 85%	)	X	100%	100%	1
Liective Medicine		50%	10%		5%	60% 60%	100%	100%	1
	- Non complex	50%	70%	10%			100%	100%	1
	- Long term conditions	50%	70%	10%	20%				1
Non elective	-Under 17	50%	80%	15%	5%	60%	100%	100%	1
Medicine	- Complex	50%	10%	85%	5%	60%			1
Iviedicine	- Non complex	50%	70%	10%		60%	100%	100%	
	- Long term conditions	50%	70%	10%	20%		100%	100%	1
-	- Under 17	50%	80%	15%	5%	60%	100%	100%	1
Elective Surgery	- Complex	50%	10%	85%	5%		100%	100%	
	- High throughput	50%	70%	10%		90%	100%	100%	1
	- Minor procedures	50%	70%	10%	20%	75%	100%	100%	1
	- Under 17	50%	80%	15%	5%	60%	100%	100%	1
Non elective	- Complex	50%	10%	85%	5%	60%	100%	100%	1
Surgery	- Non complex	50%	70%	10%	20%	60%	100%	100%	1
	- Minor procedures	50%	70%	10%	20%	75%	100%	100%	1
	- Under 17	50%	80%	15%	5%		100%	100%	1
	- Paediatrics	50%	80%	15%			100%	100%	1
	- Neonatology	50%	0%	0%			100%	100%	1
	Obstetrics	50%	0%	0%	0%	v	100%	100%	1
	Regular attendances	50%	10%	10%		70%	100%	100%	1
	Outpatients	50%	10%	55%	37%	60%	100%	100%	1
	A&E	25%	60%	0%		60%	100%	100%	1
	Community care	50%	0%	0%		33%	100%	100%	1
	Primary care	25%	60%	0%			100%	100%	
5. Average clini	<i>Notes</i>	pe and facilities				stall time required			1
5. Average clini						Facilities & St		Overheads	}
5. A <del>v</del> eraqe clini	cal time per case by staff ty	pe and facilities Staff - averge	clinical time p	er case (bours Nurse Practitioner	<u> </u>	Facilities & St Time in consultation room per	pplies Consumption of clinical supply &	(place holder in	]
5. A <del>v</del> eraqe clini	cal time per case by staff ty Service line	pe and facilities Staff - averge GP	clinical time p Consultant	er case (bours Nurse Practitioner / Therapist	Staff Hurse	Facilities & St Time in consultation room per case (hours)	pplies Consumption of clinical supply & imaging units	(place holder in calculations)	
	cal time per case by staff ty Service line	De and facilities Staff - averge GP	clinical time p Consultant Hurr	er case (bours Nurse Practitioner / Therapist Kum	Staff Hurse	Facilities & St Time in consultation room per case (hours) Runn	pplies Consumption of clinical supply & imaging units Unit/con	(place holder in calculations)	
5. Average cliai Elective Medicine	cal time per case by staff ty Service line - Complex	pe and facilities Staff - averge GP : Hund	clinical time p Conseltant Rurr 0,4	er case [bours Nurse Practitioner / Therapist Runs 0.0	Staff Hurse	Facilities & Su Time in consultation room per case (hours) No.5	pplies Consumption of clinical supply & Linaging units Utilidan 36.6	(place holder in calculations) Hom 0.5	
	cal time per case by staff ty Service line - Complex - Non complex	pe and facilities Staff - averge GP : Nume 0.1 0.4	clinical time p Consultant Nurr 0.4 0.1	er case (bours Nurse Practitioner / Therapist Nurs 0.0 0.1	Staff Nurse War, 0.3 0.3	Facilities & St Time in consultation room per case (hours) 	toplies Consumption of clinical supply & imaging units Usideau 36.6 25.3	(place holder in calculations) No.5 0.5	
	cal time per case by staff ty Service line - Complex - Non complex - Long term conditions	GP Staff - averge GP C 0.1 0.4 0.4	clinical time p Conseltant Rim 0,4 0,1 0,1	er case (bours Nurse Practitioner / Therapist Runn 0.0 0.1 0.1	Staff Nurse No 0.3 0.3 0.3	Facilities & Sec Time in consultation room per case (bours) Nors 0.5 0.5 0.5	pplies Cossumption of clinical supply & imaging units Usidean 36.6 25.9 28.6	(place holder in calculations) Runn 0.5 0.5 0.5	
Elective Medicine	cal time per case by staff ty Service line - Complex - Non complex - Long term conditions - Under 17	GP           GP           0.1           0.4           0.4           0.4           0.4	clinical time p Consultant 8 0.4 0.1 0.1 0.1 0.1	er case [bours Nurse Practitioner / Therapist Nurse 0.0 0.1 0.1 0.0	Staff Murse No.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & St Time in consultation room per case (hours) Nors) 0.5 0.5 0.5 0.5 0.5	pplies Consumption of clinical supply & Unitedant 36.6 25.3 28.6 25.3	(place holder in calculations) No.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective	Cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex	pe and facilities Staff - averge GP c Num 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consoltant Name 0.4 0.1 0.1 0.1 0.1 0.4	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.1 0.0 0.0	Staff Nurse Nurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & S Time in consultation room per case (hours) n 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Consumption of clinical supply & imaging units 0.56.6 25.9 28.6 25.9 13.6	(place holder in calculations) 8 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine	cal time per case by staff ty Service line Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex	ge and facilities           Staff - averge           GP           c:         Num           0.1           0.4           0.4           0.1           0.1           0.1	clinical time p Consultant H 0.4 0.1 0.1 0.1 0.1 0.4 0.4 0.1	er case (bours Nurse Practitioner / Therapist 8 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0	Staff Nurse <u>Nurse</u> 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & St Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Cossumption of clinical supply & imaging units U::U:U: 36.6 25:3 28.6 25:3 13.6 5.5	(place bolder in calculations) Non 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Non complex - Non complex - Long term conditions	Best         Staff - averge           GP         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	Conseltant Run 0,4 0,1 0,1 0,1 0,1 0,4 0,1 0,1 0,4 0,1 0,4 0,1 0,4 0,1 0,4 0,4 0,4 0,4 0,4 0,4 0,4 0,4	er case [bours Nurse Practitioner / Therapist Run 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse Nurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & St 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	pplies Consumption of clinical supply & inaging units United 25.3 28.6 25.9 28.6 25.9 13.6 15.6 11.6	(place holder in calculations) 05 05 05 05 05 05 05 05 05 05 05	
Elective Medicine Non elective Medicine	Cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Non complex - Non complex - Long term conditions - Under 17	Pe and facilities Staff - averge GP 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Consultant <u>Consultant</u> 0.4 0.1 0.1 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.1	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0	Staff Nurse No.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0	Facilities & S. 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	pplies Cossemption of clinical supply & imaging units United 25.9 28.6 25.9 28.6 25.9 19.6 15.6	(place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective	cal time per case by staff ty Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Non complex - Long term conditions - Under 17 - Complex	Pe and facilities Staff - averge GP 2 Num 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consoltant 9 0.4 0.1 0.1 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.4	er case (bours Nurse Practitioner / Therapist 	Staff Hurse Nurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & S. Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies           Consumption           of clinical           supply &           imaging units           0.01/000           25.8           225.9           13.6           25.9           13.6           15.6           15.6           35.6	(place bolder is calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective Medicine	cal time per case by staff ty 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	ре and facilities Staff - эverge GP : и 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant Num- 0.4 0.1 0.1 0.1 0.4 0.1 0.4 0.1 0.1 0.4 0.1 0.4 0.1	er case [bours Practitioner / Therapist 	Staff Hurse N 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & St 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	unit           Coasumption           of clinical           supply &           imaging units           036.6           25.3           28.6           25.3           13.6           15.6           15.6           11.6           35.6	(place holder in calculations) 05 0,5 0,5 0,5 0,5 0,5 0,5 0,5 0,5 0,5	
Elective Medicine Non elective Medicine	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Non complex - Non complex - Non complex - Non complex - Under 17 - Complex - Under 17 - Complex - Hinh throughput - Minor procedures	Pe and facilities Staff - averge GP c Row 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant Rim 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	er case [bours Nurse Practitioner / Therapist Nurse 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0	Staff Nerse No. 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.	Facilities & S. Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Cossemption of clinical supply & imaging units United 25.3 28.6 25.3 13.6 25.3 13.6 15.6 15.6 15.6 28.5 28.5 28.5	(place holder in calculations) know 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective Medicine Elective Surgery	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Non complex - Non complex - Long term conditions - Under 17 - Complex - Under 17 - Complex - High throughput - Minor procedures - Under 17	Pe and facilities Staff - averge GP 2 Remi 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consultant Normal 0.4 0.1 0.1 0.1 0.4 0.1 0.1 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse Nurse 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & S. Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies           Consemption           of clinical           supply &           imaging units           36.6           25.9           28.6           25.9           13.6           15.6           116           15.6           28.5	(place bolder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex	Pe and facilities Staff - averge GP c Hunce 0.11 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant N 0.4 0.1 0.1 0.1 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	er case [bours Nurse Practitioner / Therapist 	Staff Nurse <u>Nurse</u> 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Station Time in consultation room per case (hours) Num- 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies           Consumption of clinical supply & imaging units           U.d./	(place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective Medicine Elective Surgery	cal time per case by staff ty Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Long term conditions - Under 17 - Complex - Minor procedures - Minor procedures - Under 17 - Complex - Non complex - Non complex - Non complex - Non complex	GP           GP           0.1           0.4	Conseltant Rev. 0.4 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	Staff Merse New 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Su Time in consultation room per case (bours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Cossumption of clinical supply & units Unitedant 38.6 25.3 28.6 25.3 13.6 15.6 15.6 15.6 28.5 28.5 28.5 28.5 28.5 36.6 15.6	(place holder in calculations)	
Elective Medicine Von elective Medicine Elective Surgery Von elective	cal time per case by staff ty Service line - Complex - Non complex - Long term conditions - Under 17 - Complex - Non complex - Non complex - Long term conditions - Under 17 - Complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex	Pe and facilities Staff - averge GP c Hunce 0.11 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant N 0.4 0.1 0.1 0.1 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 0.1 0.4	er case [bours Nurse Practitioner / Therapist 	Staff Nurse <u>Nurse</u> 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Station Time in consultation room per case (hours) Num- 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies           Consumption of clinical supply & imaging units           U.d./	(place holder in calculations) km. 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Non complex - Non complex - Non complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Non complex - Non complex - Non complex - Non complex - Mon complex - Mon complex - Mon complex - Mon complex - Mon complex - Under 17	Pe and facilities Staff - averge GP 2 Nume 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant N 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	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	Staff Hurse Num 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & S. Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies           Consumption of clinical supply & imaging units: 0.36.6           25.9           28.6           25.9           13.6           15.6           15.6           26.5           26.6           25.9           13.6           15.6           15.6           28.5           28.	(place holder in calculations) 05 05 05 05 05 05 05 05 05 05 05 05 05	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Complex - Non complex - Mon complex - Mon complex - Minor procedures - Under 17 - Complex - Mon comp	Pe and facilities Staff - averge GP C Rev. 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Consultant Remain Consultant 0.4 0.4 0.1 0.1 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0	Staff Nurse No.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0	Facilities & Su Time in consultation room per case (bours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Consumption of clinical supply & inaging units United 38.6 25.3 28.6 25.3 13.6 15.6 15.6 36.6 28.5 28.5 28.5 28.5 28.5 36.6 15.6 26.3 36.6 15.6 26.3 36.6 15.6 28.5 28.5 28.5 28.5 28.5 28.5 28.5 28.5	(place holder in calculations) 05 05 05 05 05 05 05 05 05 05 05 05 05	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Non complex - Non complex - Non complex - Long term conditions - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Non complex - Non complex - Non complex - Non complex - Mon complex - Mon complex - Mon complex - Mon complex - Mon complex - Under 17	Pe and facilities Staff - averge GP 2 Nume 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Conseltant N 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	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	Staff Hurse Num 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & S. Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies           Consumption of clinical supply & imaging units: 0.36.6           25.9           28.6           25.9           13.6           15.6           15.6           26.5           26.6           25.9           13.6           15.6           15.6           28.5           28.	(place holder in calculations) kunner 05 05 05 05 05 05 05 05 05 05 05 05 05	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Complex - Non complex - Mon complex - Mon complex - Minor procedures - Under 17 - Complex - Mon comp	GP           GP           0.1           0.4	Conseltant Run 0,4 0,1 0,1 0,1 0,1 0,1 0,1 0,1 0,1	er case [bours Practitioner / Therapist 	Staff Murse Num 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Su Time in consultation room per case (bours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Consumption of clinical supply & inaging units United 38.6 25.3 28.6 25.3 13.6 15.6 15.6 36.6 28.5 28.5 28.5 28.5 28.5 36.6 15.6 26.3 36.6 15.6 26.3 36.6 15.6 28.5 28.5 28.5 28.5 28.5 28.5 28.5 28.5	(place holder in calculations) 05 05 05 05 05 05 05 05 05 05 05 05 05	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Complex - Non complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - Monor procedures - Under 17 - Paediatrics - Paediatrics - Paediatrics - Mononatology Obstetrics Regular attendances	Pe and facilities Staff - averge GP c Nume 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Conseltant Rue 0,4 0,1 0,1 0,1 0,1 0,1 0,1 0,1 0,1	er case [bours Nurse Practitioner / Therapist 	Staff Murse New 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Su Time in consultation room per case (bours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Cossumption of clinical supply & inaging units United 25.3 28.6 25.3 28.6 15.6 11.6 15.6 28.5 28.5 28.5 28.5 28.5 28.5 28.5 28.5	(place holder in calculations) 05 05 05 05 05 05 05 05 05 05 05 05 05	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Non complex - Under 17 - Complex - Long term conditions - Under 17 - Complex - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Non	Pe and facilities Staff - averge GP 0.11 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	clinical time p Consoltant Numerical 0.4 0.1 0.1 0.1 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 0.1 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 0.4 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0	Staff Nurse Num 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & S. Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies           Consemption of clinical supply & imaging units: 0.6.6           25.9           28.6           25.9           13.6           15.6           116           15.6           28.5           28.6<	(place bolder in calculations) key 05 05 05 05 05 05 05 05 05 05 05 05 05	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Complex - Non complex - Under 17 - Complex - Under 17 - Complex - Under 17 - Complex - Monor procedures - Under 17 - Paediatrics - Paediatrics - Paediatrics - Mononatology Obstetrics Regular attendances	Pe and facilities Staff - averge GP c Nume 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Conseltant Rue 0,4 0,1 0,1 0,1 0,1 0,1 0,1 0,1 0,1	er case [bours Nurse Practitioner / Therapist 	Staff Murse New 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3	Facilities & Su Time in consultation room per case (bours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Cossumption of clinical supply & inaging units United 25.3 28.6 25.3 28.6 15.6 11.6 15.6 28.5 28.5 28.5 28.5 28.5 28.5 28.5 28.5	(place holder in calculations) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	
Elective Medicine Non elective Medicine Elective Surgery Non elective	cal time per case by staff ty Service line - Complex - Non complex - Under 17 - Complex - Under 17 - Complex - Non complex - Under 17 - Complex - High throughput - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Complex - Minor procedures - Under 17 - Complex - Non complex - Minor procedures - Under 17 - Paediatrics - Nen complex - Minor procedures - Under 17 - Paediatrics - Non complex - Mon complex - Monotology - Distetrics - Regular attendances - Outpatients	Pe and facilities Staff - averge GP c Room 0.1 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	Consultant Reference to the second s	er case [bours Nurse Practitioner / Therapist 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0	Staff Nerse No. 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.	Facilities & S Time in consultation room per case (hours) 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	pplies Cossemption of clinical supply & inadag units: UnitAnne 36.6 25.3 28.6 25.3 13.6 15.6 15.6 36.6 28.5 28.5 28.5 36.6 15.6 28.5 28.5 36.6 15.6 28.5 28.5 36.6 15.6 28.5 28.5 28.5 28.5 36.6 15.6 28.5 28.5 28.5 36.6 15.6 28.5 28.5 28.5 28.5 36.6 15.6 28.5 28.5 28.5 28.5 28.5 28.5 28.5 28.5	(place bolder in calculations) key 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	ryear (hours)		Facilities & Supplies				
	Service line	GP	Consultant	Nurse Practitioner 7 Therapist	-Staff Nurse	Time in consultation room per year (hours)	consumption of clinical supply & imaging units	Overheads (place holder in calculations)		
	Uaitr:	Hours	Haurz	Haurs	Haves	Hours	Unit	Hour		
lective Medicine	- Complex	1	•			54 P.	2			
	- Non complex	251	36	72	215	358	18,585	358		
	- Long term conditions	÷		· · · ·	• • • • • • • • • • • • • • • • • • • •	• • • •	-			
	- Under 17	6	1	0	4	7	376	7		
lon elective	- Complex	· ·	•	•	•					
fedicine	- Non complex	168	24	48	144	241	7,481	241		
	- Long term conditions	407	58	116	349	582	13,495	582		
	- Under 17	2	Û	0	-2	3	87	3		
lective Surgery	- Complex		•	•		· · · · ·	•			
	- High throughput			÷						
	- Minor procedures	136	19	39	145	194	11,036	194		
	- Under 17		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			· · · · ·			
lon elective	- Complex	•				· · · · ·	•			
urgery	- Non complex		•		•	•		L.		
	- Minor procedures	7	1	2	8		565	11		
	- Under 17	3	1	0	3	4	130	4		
	- Paediatrics	31	6	2	23	38	962	38		
	- Neonatology		1	• •						
	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	•	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	•	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		

#### 7. Clinical hours per year

Staff, facilities & clinical supplies	Contracted hour	s per year, FTI	Es (hours)	% Clinical hours / contracted	Clinical hours per year
Unitr:	Hourstweek	Weekstyear	Hourstyear	× Clinical	Hourstyear
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	livalents			

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

	Staff FTEs				Facilities & Su	pplies			
Resource unit	GP	Consultant	Nurse Practitioner / Therapist	Staff Nurses	Consultation rooms**	Clinical supplies & imaging	Overheads	Notes	
Unitr:	variour	variow	variow	variow	varieur	variow	variaw		
FTEs, facilities - unrounded	75.24	9.62	90.36	31.79	52.87	17,502,104.14	19,76	Overheads = Number of annual	
Smallest possible unit	0.10	0.10	0.10	0.10	1.00	1.00	0.00	Smallest possible unit for the p	
TEs, 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					ll cases and servic ation rooms round				78

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## Polysystem bottom-up model (5/6)

### 10d. Overhead costs per year

i) Key values repeated from above
-----------------------------------

n above									
4,368									
562,566	and the second second		- Survey and	Hub & sp	oke	inte	grated		
Figures are repeated	here auditing - ar	e referred to in	A&C Staff	11	5		1		
And a state of the	1. State 1.		Receptionsist		6		2		
administrative st	aff			-			-		
Contracted hour	s per year, FTI	Es (hours)	Staff / shift	FTE		Annu	ial salary	To	tal cost
Hourstweek	Wookstyper	Hourstyper	Staffishift		FTE		firtaff		
40 :	40 1	1,600	5	5	14	٤	60,000	£	840,000
35	40	1,400	6		13	٤	30,000	٤	570,000
- 1	- 1	-	•		•		- 1		-
- 1	- 1	-	-		+		-		-
- 1	- 1	-	-		-		- 🦉		-
				- <b>X</b> -	33	£	42,727	£	1,410,000
Add support and adi	ministrative staff (	upes as requir	eď	~	1				
	4,368 562,566 Figures are repeated administrative st Contracted hour Heurtwook 40 35 -	4,368 562,566 Figures are repeated here auditing - ar administrative staff Contracted hours per year, FTI Hourtwook Wookstysor 40 40 35 40 	4,368 562,566 Figures are repeated here auditing - are referred to in administrative staff Contracted hours per year, FTEs (hours) Hourstwork Woolstycar Hourstycar 40 40 1,600 35 40 1,400 	4,368 562,566 Figures are repeated here auditing - are referred to in Receptionsist administrative staff Contracted hours per year, FTEs (hours) Heurrhusti Westatyaar Heurrhyear Staff / shift Heurrhusti Westatyaar Heurrhyear Staff / shift Heurrhusti Staff / Shift	4,368     Hub & sp       562,566     Figures are repeated here auditing - are referred to in A&C Staff       Figures are repeated here auditing - are referred to in A&C Staff       administrative staff       Contracted hours per year, FTES (hours)       Heurstwork       Weelartyeer       Staff I shift       FTE       Heurstwork       40       40       1600       5       35       40       1,400       6	4,368       562,566     Hub & spoke       Figures are repeated here audiling - are referred to it     A&C Staff       5     Receptionsist       administrative staff     Staff / shift       Contracted hours per year, FTEs (hours)     Staff / shift       Heuratusek     Woolartyser     Heuratuser       40     40     1,600     5       -     -     -     -       -     -     -     -       -     -     -     -       -     -     -     -       -     -     -     -       -     -     -     -	4,368     Hub & spoke     interference       562,566     Figures are repeated here auditing - are referred to it     A&C Staff     5       administrative staff     6     Beceptionsist     6       Contracted hours per year, FTEs (hours)     Staff t shift     FTE     Annu       Heurstwork     Weelatysen     Heurstyper     Staff t shift     FTE       40     40     1600     5     14     £       35     40     1400     6     13     £       .     .     .     .     .     .       .     .     .     .     .     .       .     .     .     .     .     .	4,368       Hub & spoke       integrated         562,566       Figures are repeated here auditing - are referred to in A&C Staff       5       1         Provide a staff       Beceptionsist       6       2         administrative staff       Beceptionsist       6       2         Contracted hours per year, FTEs (hours)       Staff / shift       FTE       Annual salary         Heurstreet       Weekstreer       Heurstreer       Staff/thift       FTE       60,000         35       40       1,600       5       14       £       60,000         35       40       1,400       6       13       £       30,000         -       -       -       -       -       -       -         -       -       -       -       -       -       -         -	4,368         562,566       Hub & spoke integrated         Figures are repeated here auditing - are referred to if       A&C Staff       5       1         administrative staff       6       2         Contracted hours per year, FTEs (hours)       Staff / shift       FTE       Annual salars       To         Heurrbuck       Weelatyset       Heurrboar       Staff / shift       FTE       Annual salars       To         40       40       1600       5       14       £       60,000       £         35       40       1400       6       13       £       30,000       £         .       .       .       .       .       .       .       .       .         .       .       .       .       .       .       .       .       .         .       .       .       .       .       .       .       .       .         .       .       .       .       .       .       .       .       .         .       .       .       .       .       .       .       .       .         .       .       .       .       .       <

#### iii) Additional Non clinical areas

	Consultation room area	% of Consultation room area	Circulation area	Cost / sqm	Total cost
Unitr:	Sqm	X	Sqm	£/Sqm	ť
Circulation area	835	60%	501	£ 315	٤ 157,843
Unitr:	Sam	×	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	<del>t</del> /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	T	otal cost	Notes
Unitr:	ffunit		ť	
per case	٤ 1.72	1 2	967,614	Adjustment to match benchmark E4 I case total overhead cost (UK GP Practice)
per opening hour	•	1	-	
per year	-	1	-	
Total	1	£	967,614	
Notes	Addional overhe	ead (	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 annual cost of Polyclini

	SI	taff		Contraction of the second		Facilities & Su	pplies		1
Annual costs		GP	Consultant	Nurse Practitioner 7 Therapist	Staff Nurses	Consultation rooms"	Clinical supplies	Overheads	Total
Unit	r:	ttypar	tiyoar	tiyoar	tlyoar	tlyoar	flyear	tiyoar	tiyo
Total annual costs	£	9,036,000	£ 1,164,000	£ 4,520,000	٤ 1,272,000	£ 263,071	£ 17,502,104	2 2,754,183	2 36,511,351
Notes						Contraction of the Party Street			The second s

## Polysystem bottom-up model (6/6)

11.	Total	annual	costs	atributed	to	service	lines

		Staf	f							F	acilities & Su	Ipp	lies				
	Total Annual costs		GP	Co	insultant		Nurse ractitioner Therapist	s	taff Nurses		Consultation rooms"		Clinical supplies	0	verheads		Total
	Uniter		tiyear	-	tiyear	1	tiyear	1	tiyoar		flyear		ttyear	1	tiyear	1	tiyoar
Elective Medicine	- Complex	-				-	4	1		T		-				1	14.1
	- Non complex	ź	33,606	٤	4,838	٤	3,399	12	9,596	2	£ 544	ź	18,585	٤	5,695	ž.	76,863
	<ul> <li>Long term conditions</li> </ul>	·	1.00			200			-								•
	- Under 17	2	777	£	147	£	20	É	194	1.2	E 11	ź	376	ź	115	£	1,640
Non elective	- Complex			100				1		1						-	
Medicine	- Non complex	٤	22,566	٤	3,249	2	2,686	٤	6,444	1	£ 365	ž	7,481	٤	3,824	£	46,614
	- Long term conditions	£	54,572	٤	7,856	£	6,495	£	15,583	1	E 883	ź	13,495	÷	9,248	£	108,132
	- Under 17	2	299	٤	57	£	8	2	75	1	4	1	87	£	44	٤	574
Elective Surgery	- Complex							-		-		-	+			-	4.1
	- High throughput - Minor procedures	1.1			- L -		a	1	- X -		1		the l	-	1	100	
		ź	18,190	ź	2,619	£	2,165	É	6,493	2	E 294	1	11,036	£	3,083	5	43,880
	- Under 17		-	-		-		-				-		-		-	
Non elective	- Complex				1.1	-	- A - 1	1				-		-	× 1		
Surgery	- Non complex						4.1	1		-		-	*				
	- Minor procedures	£	988	ź	142	٤	118	£	353	1	£ 16	÷	565	£	167	ž	2,349
	- Under 17	£	448	٤	85	2	12	E	112	1	6	ž	130	£	66	÷	859
	Paediatrics	E	4,125	٤	779	2	107	÷	1,031	1	£ 59	1	962	÷	612	1	7,675
	- Neonatology	-		-				-				-		-		-	
	Obstetrics	1		1		1		1									
	Regular attendances	E	3,409	ź	3,436	£	1,420	Ê	7,950	12	£ 386	٤	33,097	٤	4,044	£	53,743
	Outpatients	£	205,831	٤	1,140,794	£	317,222	E	411,421	12	£ 23,323	ź	580,754	٤	244,171	٤	2,923,515
	A&E	£	312,242	1		٤	86,706	£		1		ź	192,429	٤	61,734	٤	763,028
	Community care		-			É.	1,772,294	ź	708,729	2	E 73,048	٤	3,274,314	٤	764,759	٤	6,593,143
	Primary care	٤	8,378,947			ž	2,326,749		•	2	158,235	ž	13,368,793	£	1,656,619	ź	25,889,343
	Total	£	9,036,000	£	1,164,000	٤	4,520,000	E	1,272,000	1		2	17,502,104	ź	2,754,183	٤	36,511,359
	Notes							-		-	ti:	-	48%	-	87		

#### 12. Unit costs by service line

		Staff				Facilities & St	upplies		
	Total Annual costs	GP	Consultant	Nurse Practitioner / Therapist	Staff Nurses	Consultation rooms"	Clinical supplies	Overheads	Total
	Unitr:	flear	. ticare	ticare	flear	ficare	ilcaro	ticare	tica
Elective Medicine	- Complex		• 3						
	- Non complex	ž 46.91	£ 6.75	£ 5.58	£ 13.40	٤ 0.76	£ 25.94	£ 7.95	£ 107-3
	<ul> <li>Long term conditions</li> </ul>			0.000					
	- Under 17	£ 53.61	£ 10.13	£ 1.40	£ 13.40	٤ 0.76	£ 25.94	٤ 7.95	£ 143.1
Non elective	- Complex						· · · ·		20 25
Medicine	<ul> <li>Non complex</li> </ul>	£ 46.91	£ 6.75	£ 5,58	£ 13.40	£ 0.76	£ 15.55	£ 7.95	5 96.8
	<ul> <li>Long term conditions</li> </ul>	£ 46.91	£ 6.75	£ 5.58	£ 13.40	£ 0.76	£ 11.60	٤ 7.95	£ - 92.91
	- Under 17	£ 53.61	£ 10.13	£ 140	£ 13.40	٤ 0.76	£ 15.55	1 7.95	102.8
Elective Surgery	- Complex	· · · ·			(4) (		21		
	- High throughput - Minor procedures		A	2.1			1 ×	1	
		£ 46.91	£ 6.75	٤ 5.58	£ 16.74	£ 0.76	£ 28.46	£ 7.95	ž. 113.1
	- Under 17	· · · · · · · · · · · · · · · · · · ·			17	1	-		
Ion elective	- Complex	14 mm P 2007			4 (A)			N-04	
Surgery	- Non complex		10000 - 100 E 10						11000
	- Minor procedures	£ 46.91	£ 6.75	£ 5.58	٤ 16.74	£ 0.76	£ 26.85	£ 7.95	£ 111.5
	- Under 17	£ 53.61	£ 10.13	£ 1.40	£ 13.40	£ 0.76	٤ 15.55	£ 7,95	£ 102.84
	- Paediatrics	£ 53.61	£ 10.13	£ 1.40	٤ 13.40	٤ 0.76	٤ 12.50	٤ 7.95	£ 99.7
	- Neonatology								741
	Obstetrics						14 A A A A A A A A A A A A A A A A A A A		
	Regular attendances	٤ 6.70	2 6.75	E 2.79	ž 15.63	£ 0.76	£ 65.06	£ 7.95	105.68
	Outpatients	£ 6.70		£ 10.33		£ 0.76	£ 18.91	£ 7.95	1. 95,19
	A&E	£ 20.11		£ 5.58	£ 6.70	£ 0.38	٤ 12.39	£ 3.98	1 48.13
	Community care			£ 18.42	٤ 7.37	£ 0.76	£ 34.04	£ 7.95	£ 68.54
	Primary care	£ 20.11		£ 5.58	100000-0420	£ 0.38	£ 32.08	£ 3.98	£ 62.1
	Total	٤ 16.06	£ 2.07	£ 8.03	£ 2.26	٤ 0.47	£ 31.11	£ 4.90	£ £4.90
	Percentage of total costs	25%	3%	12%	3%	0.72%	47.8%	7.5%	100;

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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

ase assumptio	ons for cap	ex, transition and double	running costs	'Radicalnes	ss' of lever pull			
Capital efficiency		Type of polysystem		Core	Assume 100% 'hub and spoke' wit			
parameters		Hub & spokes	Consolidated	scenario	[15:75:10] new -built to refurbish to reuse ratio with base assumptions a listed in table			
Space utilisa	ation	75%	75% (original HfL)					
Capex — New-bu — Refurbis — 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 – New-bu – Refurbis – Reuse	ilt	£380 /m² £260/m² £85/m²	£400 /m² £290/m² £84/m²		reuse ratio Uses base assumptions with the following changes — 80% space utilisation, — Set up costs transitioning from			
Set-up costs	5	~£1.0m per polysystem	~£1.0mper polysystem		£1.0m today to £0.5m — Transition costs 20% efficiency			
Transition costs		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		<ul> <li>Transition costs 20% enciency loss for 1/2 year + 15% residua acute activity for 1/2 year</li> </ul>			
ace of impleme	entation							
Straight line	Polysys		of new build to leasing, imple n achieved by 2016/17 in agg		shift to low er cost settings; 2) set-up o			
Front-end	Polysys	Included in tariff shifts items: 1) all new builds com isition costs transition achie			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>B</b> £ 165m <sup>1</sup>	£ 150m <sup>1</sup>
C £ 130m	£ 95-110m

Other costs<sup>2,3</sup> 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

<sup>1</sup> 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

	te spend gory <sup>1</sup>	Example source of savings	Acute costs, 16/17 £bn <sup>2</sup>	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-class 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 <sup>3</sup>	Reduction in excess beddays, case-mix adjusted ALOS and increase in daycase rate to best in dass relative to peers		captured in d overhead	o
5	ОР	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 £2.9b
djust otent ssum	ed for underlying b ial savings incorpo ied at £200 saving	ditional savings may be made from imaging, patholog yand theatres, base case activity growth and cost inflation to 2016/17 orate studies from a range of sources, from individual acute London Trusts to Nation s/bed day and 75% bed utilisation	al benchmarking of L	ondon as a whole	Some savings will be netted against losses from excess bed day income
Eveni	n absence of activi	ity shifts, 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

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Source: Wards observation

95

## 1 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 <sup>1</sup>	
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



<sup>1</sup>Top 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 London<sup>1</sup>

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 rate<sup>1</sup> 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%

rugs: Detailed	procurementsavings levers Levers		ent practices Potential savings im pact, %
Purchasing power	Competitive tenders and price negotiations Purchasing consortia Parallel imports	Run tender exercises on drug classes with therapeutic or generic alternatives Leverage increased buying pow er of purch consortia Capture the low est possible prices from cr drug trade w hile guaranteeing supply and o	nasing Oss border
Dem and changes	Control of therapeutic creep Therapeutic substitution Generic substitution N to oral sw itches Enforcement of policies for TTA* and outpatient drugs	Ensure that drugs are used within guideline Switch to most cost-effective product in druwith several therapeutic alternatives Switch to most cost-effective generic altern Optimise intravenous vs. oral delivery rout Enforce compliance with policies for TTA* outpatient prescriptions	ug classes native > Up to 3-5 es
Process changes	Income control for drugs with special reimbursement Waste reduction Optimised distribution channels Improve order-to-payment process	Ensure full reimbursement for drugs that c specifically charged for (e.g., improved cod Optimise use of patients' drugs and avoid Optimise use of home-delivery options and dispensing of drugs in community pharmad Ensure full contract compliance and avoid overpayment for drugs	ding) waste d 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, m<sup>2</sup>



# 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

| 107
# **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)



<sup>1</sup> 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

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

<sup>4</sup> 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



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 London<sup>1</sup>

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 numbers<sup>1</sup>





Keylevers

	Objective	Action	Analysis	Rationale
	Increase number of	Ensure all theatre slots are booked and reduce cancellations and DNAs	Overall theatre efficiency and cancellations	<ul> <li>Additional capacity could bring in additional income</li> </ul>
	patients p.a.	Increase number of operating sessions per day and extend operating days	]	
Operations	Reduce time	Increase session time utilisation Start sessions on time Avoid early finishes	Minutes wasted during sessions	<ul> <li>Especially with specialties with a short time per case</li> </ul>
effectiveness	per patient	Reduce emergency readmissions within 28 days	Peer comparison of emergency readmissions	<ul> <li>Key quality indicator used by commissioners</li> </ul>
	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

oquitaionia	Hours	Session equivalents <sup>3</sup>	Theatre equivalents <sup>3</sup>	Costs⁴	Cost savings opportunity, £m
Late starts	6000 <sup>1</sup>	1500	3.0	Pay cost per session: 2402	3.6
	3000 <sup>2</sup>	750	1.5	56551611. 2462	1.8
<b>Early</b>	7000	1800	3.5	Paycostper	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			Tota	l opportunity: 4.5-6.5 eatre equivalents or £6.3-9.1m

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%<sup>1</sup> 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%
Clinic room	Afternoon	80%	60%	85%	45%	56%	45%	15%
CI	Evening	80%	60%	65%	45%	56%	45%	5%
om B	Morning	75%	35%	53%	91%	34%	45%	10%
Clinic room	Afternoon	80%	60%	85%	45%	56%	45%	15%
	Evening	80%	60%	65%	45%	56%	45%	5%
om C	Morning	75%	35%	53%	91%	34%	45%	10%
Clinic room	Afternoon	80%	60%	85%	45%	56%	45%	15%
CI	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 <sup>1</sup>	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 1/127



#### Estates costs – Trusts' asset utilisation varies sixfold

NATIONAL





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

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## 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

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## 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 | 131

	Trust 5	Trust 4	Trust 3	Trust 2	Trust 1	m <sup>2</sup> of floor area per bed	6 For example, there is significan base across different providers	
							6 For example, there is significant variation in estate size relative to bed base across different providers	
210	222	223	244				on in estate size relati	
			4	273	422		ive to bed	



OURCE: DH Estates and Facilities returns, 200

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# 6 PFI restructuring – renegotiating the interest charges of 80% of the PFI schemes by 2–3bp<sup>1</sup> 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

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### 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 costs<sup>2</sup>, 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	tors affecting Aggressive case But if it Potentially because		Aggressive case But if it Potentially because		Change in expe		cpenditure	nditure	
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	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	Ē			
Non-acute growth rate	c. 4.9% CAGR growth	c. 6.1% CAGR	Higher latent demand as access improves		682				
Reduction in acute tariff	3.7% overall CAGR efficiency requirement	1.8% overall CAGR	Future efficiency targets are reduced		1,	112²			
IP shift to lower cost settings	17% shift	8.5%	Only half activity shifts (e.g., rollout of		295	0	2		
OP shift to lower cost settings	55% shift	27.5%	Only half activity shifts (e.g., rollout of only 1/2 polysystems)		87	o	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	0.2		
1° integration into polysystem	100% integration	50%	Only half of 1° integrates with lower unit cost of polysystem		590				
CHS integration into polysystem	100% integration	50%	Only half of CHS integrates with lower unit cost of polysystem		490				
Removing duplication of services	EH, OH, MIU duplication removed	None	Inability to renegotiate contracts/ incentivise GPs to remove duplication		30	0	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	o	0.9		
Prevention	10% emergency medicine prevented	5% of emergency medicine prevented	Poor targeting or ineffective interventions for proportion of patients		58	0	0.5		
Decommissioning In 2007/8 prices	7% all elective procedures, 30% OP, 10% A&E, 10- 15% diagnostics	decommissioned	Lack of strict adherence to protocols		225	P	1.		

## 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

actors affecting	Aggressive case	But if it	Due to	Change in sper	
cost savings assumes		was		£m	%
Time/case in polysystem	Acute/1º/Comm/A&E 30/10/20/15 mins	Acute/1º/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 cost £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
Polyclinic size	1,520m²	2,030m <sup>2</sup>	Average size of polydinic is larger than estimated	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

(includes cap	expenditure a bitalised operat umber = funding 2016/2017 <sup>3,4</sup>	CONCLUMENTAL CONCUMPTION OF A	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

	Lower case PCT funding allocation	Base case PCT funding allocation	Higher case PCT funding allocation	Total capital costs	Total transitio costs
Lower range growth	-1.0/0.3/1.7	-0.3/1.0/2.4	0.3/1.7/3.1	0/430/260	0/950/520
Base case growth	-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
Higher range growth	-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

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

(includes cap	expenditure a pitalised operat umber = funding 2011/2012 <sup>3,4</sup>	LIPS ADDITION OF A DOMESTIC ADDITION OF	nulative capital and s 2007/8-2011/12		
	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 <b>/0</b> .1	-0.4/-01/ <b>0.5</b>	-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	Base case PCT funding	Higher case PCT funding	Total capital	Total transition
	allocation	allocation	allocation	costs	costs
₋ower 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/ <b>0.4</b>	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/ <b>0.1</b>	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	activity growth	Total 2016/17 expenditure from activity growth only	Impact from incremental cost inflation	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 Moderate HfL exp en diture
Acute	5.7	0.7	<u>6,5</u>	<u> </u>	<u> </u>	-21	<u>5.3</u>	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	0.0	0.0	0.0	0,7	0,5
Mental Health	1.6	0.4	2.0	0.3	2.3	-0.4	1.9	1.9	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
Phar ma cy	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	0.1	0,0	0.1	0.0	0.1	0.1	0.1
Tertiary and specialist	I	1		Į –		I	I		l
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			
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	Net acute tariff reduction	Shift of acute activity to lower costsetting	LTC, Prevention, Decomm ission ing	Non -acute reduced unit costs in 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	Net acute 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	i 0.4	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	