Doing More with Less Paediatric Cardiac Surgery after the Financial Crisis



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The Great Ormond Street Hospital for Children



president lyndon johnson to

j kenneth galbraith on 'economics'



"Making a speech about economics is a lot like pissing down your leg. t seems hot to you, but it never does to anyone else."



Why talk about economics?

1. the financial crisis and subsequent austerity

2. Devi Shetty's challenge to me



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"What moral right have you got to charge \$50,000 for an operation I can do for less than \$3000?

Devi Shetty Narayana Healthcare, Bangalore



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How can we do More for Less?





Tetralogy of Fallot





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What is Tetralogy of Fallot?

The normal heart





Tetralogy of Fallot















high cost, but is it worth it?

OPEN ORCESS Freely available online

Lifetime Costs and Outcomes of Repair of Tetralogy of Fallot Compared to Natural Progression of the Disease: Great Ormond Street Hospital Cohort

Rachael Maree Hunter¹*, Mark Isaac², Alessandra Frigiola², David Blundell³, Kate Brown², Kate Bull²

PLoS ONE 8(3):e59734, 2013



PLOS ONE





Figure 5. Breakdown of health care costs for Tetralogy of Fallot patients from birth to age 55: undiscounted. doi:10.1371/journal.pone.0059734.g005



1085 patients at GOSH 1964 - 2009





Quality-Adjusted Life Year (QALY)

- based on the number of years that would be added to life by the intervention
- each year of perfect health is assigned value of 1.0, down to 0.0 for being dead
- if quality of life is reduced, so is the value to a number <1.0





Quality-Adjusted Life Year (QALY)

- Half a year lived in perfect health ≈ 0.5 QALYs (0.5y x 1 utility)
- 1 year lived with a utility of 0.5 also = 0.5 QALYs (1.0y x 0.5 utility)
- Utility can be estimated using quality of life scores





cost per QALY = £2000 to £3000



Figure 3. Cost-effectiveness plane – cost per Fallot patient over 55 years graphed against the QALY gained compared to natural progression –10,000 simulations. doi:10.1371/journal.pone.0059734.g003



Lifetime Costs and Outcomes of Tetralogy of Fallot



How is all this paid for?



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%of GDP

£billions



Chart 1 General government expenditure on UK Health Services: 1950/51 to 2010/11



UK Health Expenditure

Table 4: NHS net expenditure, £m and per head, UK countries, 2006/07 to 2010/11

Year		Total expend	liture, £m	Expenditure per head, £				
	England	Wales	Scotland	N. Ireland	England	Wales	Scotland	
2006/07	76,926	5,000	9,035	2,961	1,515	1,688	1,766	
2007/08	83,335	5,273	9,727	3,055	1,631	1,772	1,891	
2008/09	90,035	5 562	10,179	3,200-	1,740	1.860	1,969	
	97,272	5,917	10,593	3,443	1,877	1,973	2,040	
2010/11	99,249	6,065	10,821	3,790	1,900	2,017	2,072	

Source: Public Expenditure Statistical Analyses, October 2011 update

Note: ng Forland may not be consistent with those in Table 2 because they are calculated on a difference of the second seco Total Expenditure on Services aggregate, rather than resource Accounting basis

CIVITAS: Institute for the Study of Civil Society

The impact of the NHS market

An overview of the literature

21







The National Health Service in England and Wales, 1948







(Oxford, Oxford University Press, 1998), p108.



Figure 3 The National Health Service in England, 1974

Source: C. Webster, The National Health Service: A Political History,



The Internal Market

- Late 1980s, precipitated by an access crisis in paediatric cardiac surgery
- Thatcherite belief in the market (decreased costs, improved efficiency, quality innovation and responsiveness)
- The purchaser:provider split





NHS structure...in the noughties



Figure 1: Structure of the NHS in England: 2004/05 to 2006/07





	Mrs Smith	Mr Jones			
The patients ³					
Treatment	Elective caesarean during a 7 day spell in April	Emergency admission for fragility hip fracture in April			
Code	ICD-10 codes are O300 (twin pregnancy and Z37.2 (twin both live born) OPCS-4 code is R17.2 (elective lower uterine segment caesarean	ICD-10 codes are S7200 (fractured neck of femur) and W19.0 (unspecified fall at home) OPCS-4 codes are W37.1 (primary total prosthetic replacement of hill joint using cement) and 794.3 (left			





The Internal Market

- only modest improvements over time, and difficult to associate them with the market reforms
- shift of power from hospitals to primary care and from providers to purchasers



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The impact of the NHS market

An overview of the literature



failure to deliver benefits

- refusal to create a 'real' market ullet
- weak incentives to engage participants and break patterns
- lack of stable policy environment to inspire commitment •



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The impact of the NHS market

An overview of the literature





MIRROR, MIRROR ON THE WALL How the Performance of the U.S. Health Care System Compares Internationally

Karen Davis, Kristof Stremikis, David Squires, and Cathy Schoen **June 2014**





EXHIBIT 1. INTERNATIONAL COMPARISON OF SPENDING ON HEALTH, 1980–2011

Average spending on health per capita (\$US PPP)



Note: \$US PPP = purchasing power parity.

Source: Organization for Economic Cooperation and Development, OECD Health Data, 2013 (Paris: OECD, Nov. 2013).



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Total expenditures on health as percent of GDP





EXHIBIT ES-1. OVERALL RANKING

COUNTRY RANKINGS											
Тор 2*											
Middle											
Bottom 2*		Ψ									
	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING (2013)	4	10	9	5	5	7	7	3	2	1	11
Quality Care	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
Access	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
Efficiency	4	10	8	9	7	3	4	2	6	1	11
Equity	5	9	7	4	8	10	6	1	2	2	11
Healthy Lives	4	8	1	7	5	9	6	2	3	10	11
Health Expenditures/Capita, 2011**	\$3,800	\$4,522	\$4,118	\$4,495	\$5,099	\$3,182	\$5,669	\$3,925	\$5,643	\$3,405	\$8,508

Contraction of the second seco Notes: * Includes ties. ** Expenditures shown in \$US PPP (purchasing power parity); Australian \$ data are from 2010. Source: Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Policy Survey; Commonwealth Fund National Scorecard 2011; World Health Organization; and Organization for Economic Cooperation and Development, OECD Health Data, 2013 Paris: OECD, No. 2013).





reorganisations.

David Cameron, Tory Party Conference Speech, 2006

no more "top-down reorganisations" of the NHS Andrew Lansley, Conservative Party press release, 11 July 2007



So I make this commitment to the NHS and all who work in it: no more pointless

The coalition went on to launch the biggest top-down reorganisation of the service in its history





The National Health Service in England and Wales, 1948

Source: C. Webster, The National Health Service. A Political History, (Oxford, Oxford University Press, 1998), p21.

















things better when put them circle

banksy





2013







so big, 'you could probably see it from space' Sir David Nicholson, 2010





ldeas that change health care TheKingsFund> How the money flows from April 2013











ldeas that change health care

TheKingsFund>

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The new NHS: Who can influence commissioning of services

key



new organisations from April 2013

Commissioning plan









Figure 1 The main relationships between health bodies in London





a very complicated landscape



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'Explains the crisis in a way that actually sticks ... to my amazement I finally grasp it' JANICE TURNER. THE TIMES



PAG



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Ö

a million seconds 11.6 days a billion seconds 31.7 years a trillion seconds 31,700 years



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John Allen-Paulos

DIGINUMOEIS







Debtris

cash in context (around 2009)





UK budget deficit and borrowing







The UK National Debt as % of GDP



http://www.tradingeconomics.com/united-kingdom/government-debt-to-gdp





UK National Debt % GDP



UK National Debt over time











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Spending + 85%





UK Government net borrowing - % of GDP







OBR Forecast Today









United Kingdom Governme.. United States Governme..



UK Debt Interest Payments







Today's Budget





Other Views on Austerity are Available









Richard Douglas, Department of Health director general of policy, strategy, and finance, has reportedly said that the drive to find further efficiency savings in the XHS will continue after 2015,¹ with the total savings rising from £20bn (€24.6bn; \$31bn) to a possible £50bn by 2019-20. His comments are a startling admission of the long term impact on public services of the global financial crisis and ensuing recession.



BMJ 2012;344:e2416 doi: 10.1136/bmj.e2416 (Published 19 June 2012)



Appleby, J A Productivity Challenge too far?



Figure 3 The dynamics of the productivity gap





Appleby et al 2010, Improving NHS Productivity, Kings Fund



• Predicted % of current income over next decade











significant cost pressure







less money more demand greater expectations

rising costs



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BMJ A Productivity Challenge too far?

BMJ 2012;344:e2416 doi: 10.1136/bmj.e2416 (Published 19 June 2012)







NHS

6 in 10

6 in 10 trusts are relying on financial support from the Department of Health or planning to draw down their reserves.





Figure 1: Trends: What is your organisation's forecast end-of-year financial situation?

QMR 1-4 based on a panel of 50 trust finance directors

http://qmr.kingsfund.org.uk/2015/14/overview





http://qmr.kingsfund.org.uk/2015/14/overview

Κ

NHS TRUSTS

Figure 9: Trends: The NHS is now in its final year of the so-called Nicholson Challenge. What is your estimate of the risk involved in achieving productivity gains of the value of £20 billion by 2014/15?





NHS TRUSTS





We're doomed, Capt Mainwaring



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Κ

"When you take over a loss-making business, vou are in 'turnaround'. You must first cut the costs

You must first cut the cos to stop the cash drain"



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Jon Moulton, CEO Better Capital, Feb 2011





TOP STORIES IN Business

HEALTH INDUSTRY



NOVEMBER 25, 2009





















2012 - 14

2007 - 09

 NH Jamshedpur • MS Ramaiah NH Bangalore









how Shetty controls costs

economies of Scale

- 4700 open heart operations in one hospital each year
- cf England, 2900 operations in 10 centres
- cf Chicago, 750 operations in 9 centres





'Asset-light' business model

- green field sites
- low maintenance design
- Narayana elsewhere
 - in other hospitals, but their staff, their pathways, their rules



how Shetty controls costs

low construction cost buildings (pre-fab, single storey clusters)



doing more each day, every day

- early starts, late finishes
- shift system for clinicians
- 7 day elective work
- patient 'flow' paramount



how Shetty controls costs





how Shetty controls costs

- direct control of procurement
 - forcing suppliers prices down
 - 'leveraging' his brand reputation

 - standardisation of techniques
 - challenging 'single-use'



buys locally if possible, no need to accept US/UK/EU prices



- engaging the staff O
 - daily profit and loss data •
 - for the individual, the hospital and the organisation
 - delivered to mobile phone
 - trades on competitive instinct



how Shetty controls costs

1000small things



"1 gram off every component"

saves 100kg overall "we have to do 1,000 small things"





Technology

- social media instead
- WhatsApp as pr
 - audio ar
 - IM emposition
 - reduced
 - excellent t
- single numb







data that we shed are turning the concept of privacy into an archaism, despite half hearted identifiable information".

John Harman 2015 Disrupting the Intelligence Community Foreign Affairs 94(2):99-107

50% fall in interest in the term 'privacy' in the last decade Google Trends



"The seemingly meaningless, incidental, bits of (and doomed) regulation to protect 'personally



Could we do any of this here (or anywhere in the West)?



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we have usually asked for more, rather than working out how to do it oetter for less



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go compare

UK



India

- huge untreated population
- no universal access
- poorly developed medical insurance
- people have to pay for care
- spiritual (access = gift from God)
- patients MUST travel



- population needs met
- universal access
- NHS + private
- it's free
- secular
- patients don't like to travel



go compare



India

- case-mix, simpler
- largely single visit surgery
- free market, but effective centralisation: not enough centres
- 2 star accommodation
- not much choice





- case-mix complex
- 88% single visit surgery
- regionalisation not centralisation: too many centres?
- 4 to 5 star accommodation
- ? patient choice




http://ccgtools.england.nhs.uk/procurement/ProcAtlasJuly2014/atlas.html



NHS Procurement vinyl gloves (large) £/hundred

enormous range in prices Trusts pay



I wonder what he would say





SAFETYIN NURSE-TO-PATIENT RATIOS AND THE FUTURE OF HEALTH CARE



SUZANNE GORDON JOHN BUCHANAN TANYA BRETHERTON







efficiency; core principles

- focus on patients; design the care around them, not the staff
- identify value for the patient & get rid of everything else
- get it right first time: complications are expensive
- eliminate waste (inc.time)

this is a process of continuous change







- lean management, flow management
- standardisation, SOPs
- real time data, to the people on the shop floor
- devolving tasks



efficiency at local level







methods must be in core training

Eugene Litvak **IHO** Boston



it can be done



Peter Willats **APT Global**





Jonathan Oberlander UNC Chapel Hill

Health Care Policy in an Age of Austerity NEJM 365;12: 1075-7, Sept 22 2011



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"The United States needs systematic cost control, not budget gimmicks."



Surgical : Tetralogy repair 2006-2009







-	-National average
	-98% Control Limit
-	- 99.95% Control Limit
٠	Alder Hey Hospital
	Birmingham Childrens Hospital
Δ	Liverpool Heart and Chest Hospital
•	Bristol Children's Hospital
\diamond	Nottingham City Hospital
	Freeman Hospital
4	St George's Hospital
•	Great Ormond Street Hospital for Children
0	Glenfield Hospital
	Evelina Children's Hospital
4	Hammersmith Hospital
•	Hull Royal Infirmary
0	Harley Street Clinic
	Leeds General Infirmary
Δ	Manchester Royal Infirmary
0	Wolverhampton Heart Centre
	Northern General Hospital
	Royal Brompton Hospital
4	Queen Elizabeth Hospital, Edgbaston
0	John Radcliffe Hospital
¢	Royal Hospital for Sick Children
	Royal Sussex County Hospital
Δ	Royal Victoria Hospital
0	Southampton General Hospital
٠	St Thomas Hospital
	University College Hospital
Δ	University Hospital of Wales
•	Victoria Hospital



we can do it for less, but will you let us?



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What do you value?



"The one outcome that is never measured in the NHS is the outcome of what politicians do"





Polly Toynbee





- **Devi Shetty Peter Willats Claire Newton Eugene Litvak The Kings Fund The London Library** various contacts in the City & WHO
- many others who would rather not be named



special thanks to

