


Imperial College  
London

DH Department  
of Health


NHS  
National Cancer Action Team  
Part of the National Cancer Programme

 **A cost-benefit analysis of  
the National Training Programme in  
Laparoscopic colorectal surgery**

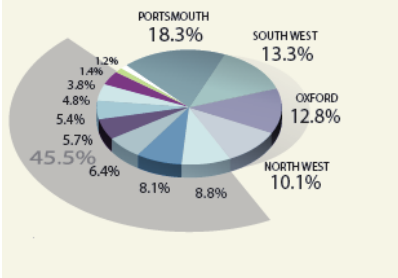
Melody Ni, Hugh MacKenzie,  
Laura Langsford, Andy McMeeking, Mark Coleman &  
George Hanna

15 June 2012, Cancer Outcomes Conference, Birmingham

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 [www.lapco.nhs.uk](http://www.lapco.nhs.uk)  
national training programme in  
laparoscopic colorectal surgery

- Instituted in 2008 by the Cancer Action Team
- Supervised training
- 144 consultant delegates
- 65 trainers
- 11 training centres (NHS trusts)



Among the 149 acute trusts in England

- 51% have at least one Lapco delegate
- 61% have at least one Lapco delegate/trainer

*Poster number 9*

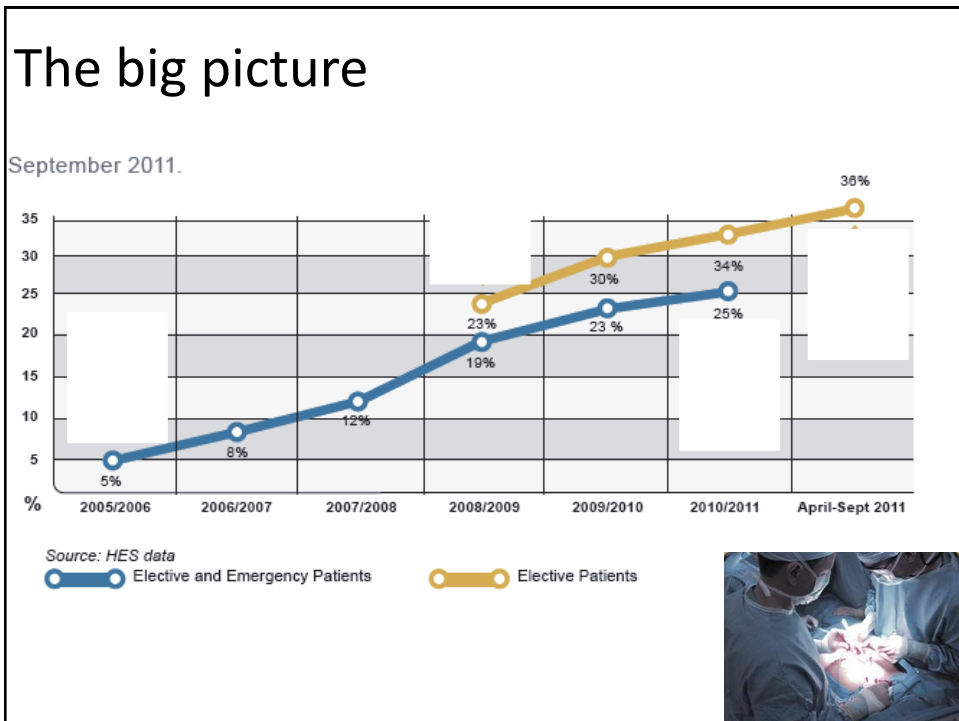
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### Cost-Benefit Analysis

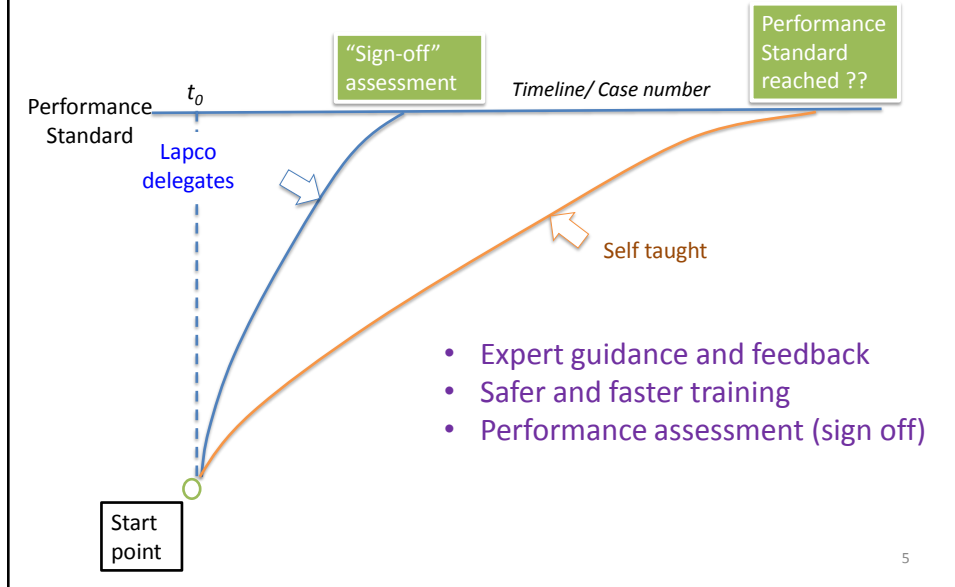
- What are the benefit?
- Compare against?

- Better clinical outcomes
- Increased uptake of LCS
- Infrastructure

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## Why supervised training?



## Compare and contrast

Parameter	Self-taught			N (cases)=	Lapco delegates
	Overall outcome	<151 cases	>150 cases		(N=816)
Conversion	8.75%	13.22%	4.39%	4905	5%
Complication	15.93%	21.40%	10.60%	4902	14.3%
LOS*	7 (5-11) days	7	7	3685	5 days
Mortality	1.96%	2.41%	1.35%	3002	0.5%

*Average of 30 supervised cases or less*

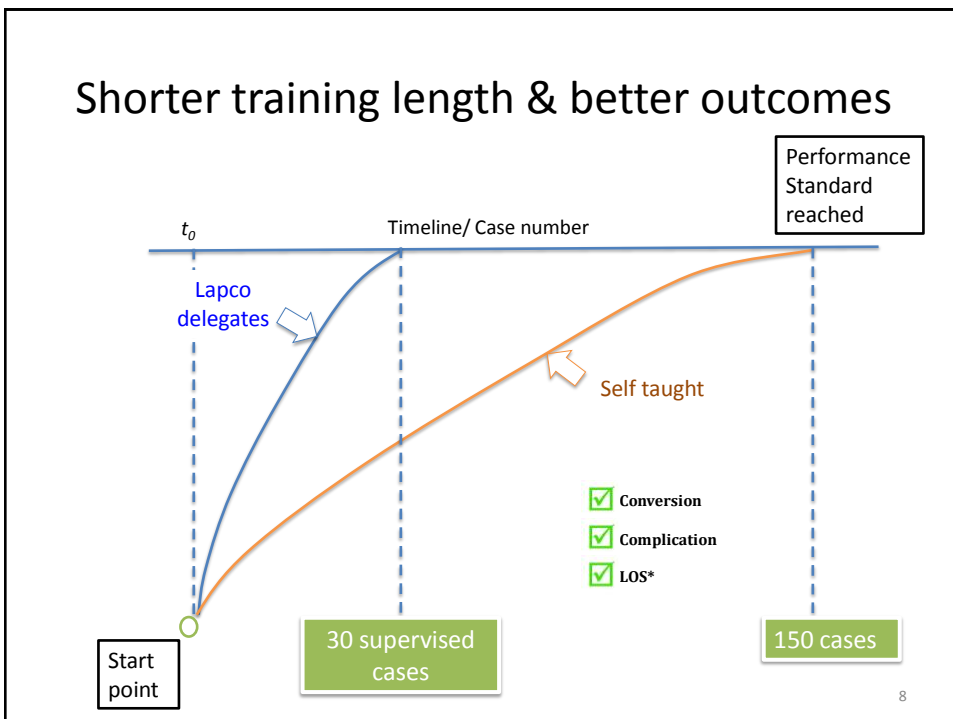
Miskovic D, Wyles SM, Ni M, Darzi AW, Hanna GB. Systematic review on mentoring and simulation in laparoscopic colorectal surgery. *Ann Surg* 2010;252(6):943-51.

- Better clinical outcomes
- Increased uptake of LCS
- Continued use of infrastructure

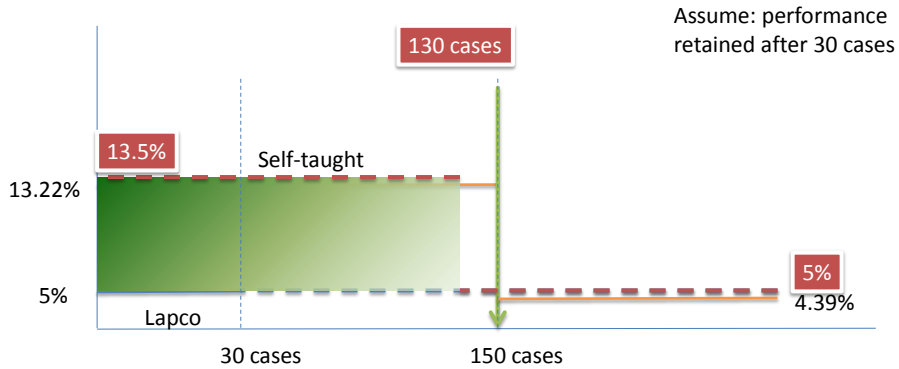
- Total financial investment projected till the end of the programme (March 2013)

Cost-Benefit Analysis

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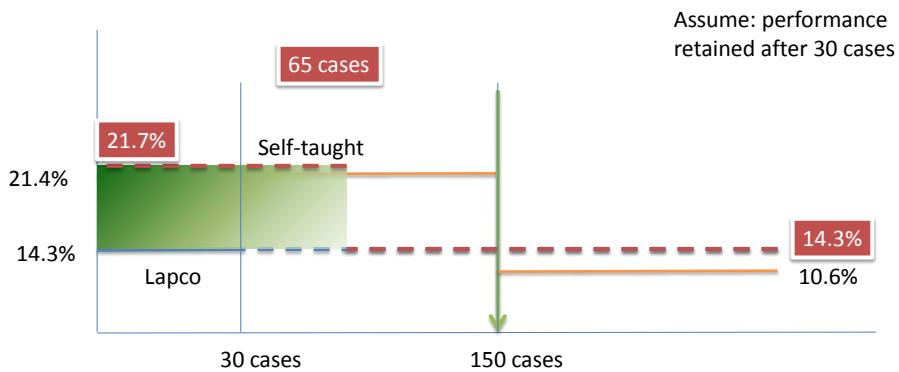
## Lapco v self-taught: Conversion



- Conversions saved per delegate =  $130 \times (13.5\% - 5\%) = 11.05$

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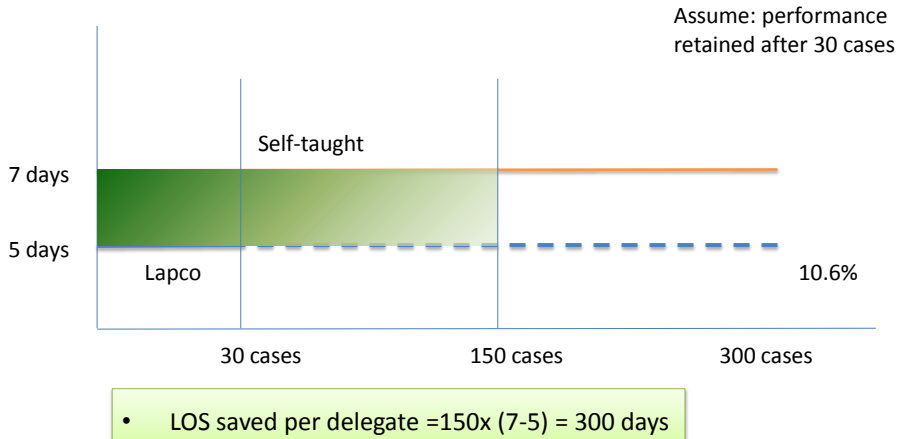
## Lapco v self-taught: Complications



- Complications saved per delegate =  $65 \times (21.7\% - 14.3\%) = 4.81$

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## Lapco v self-taught: Length of hospital stay



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## Benefits – unit price

Conversion	-
Complication*	£26,331
LOS	£265= £225+£40

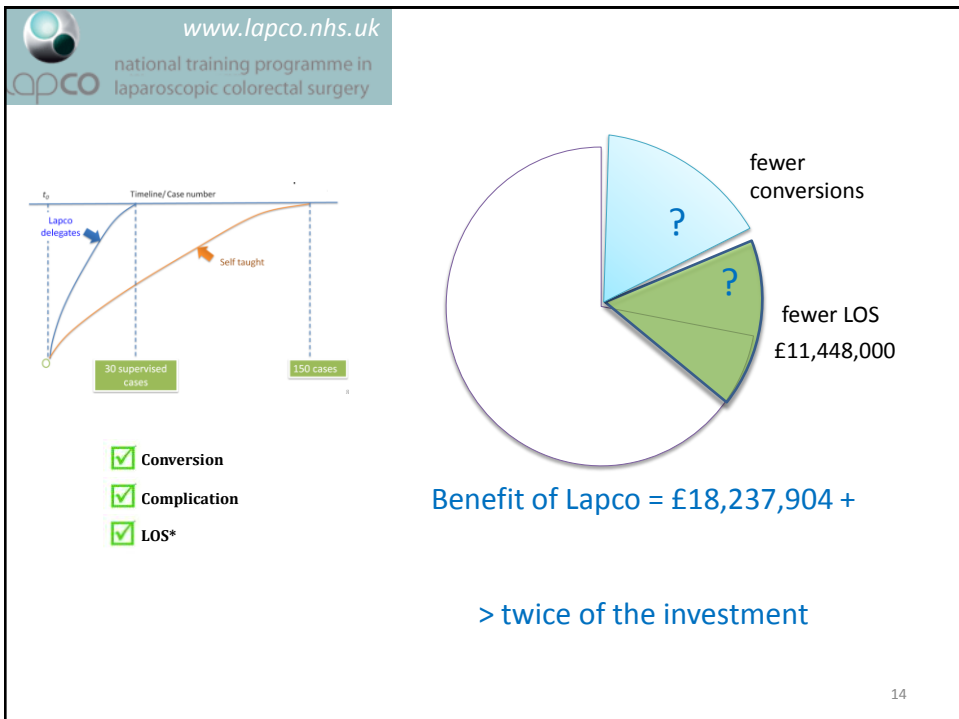
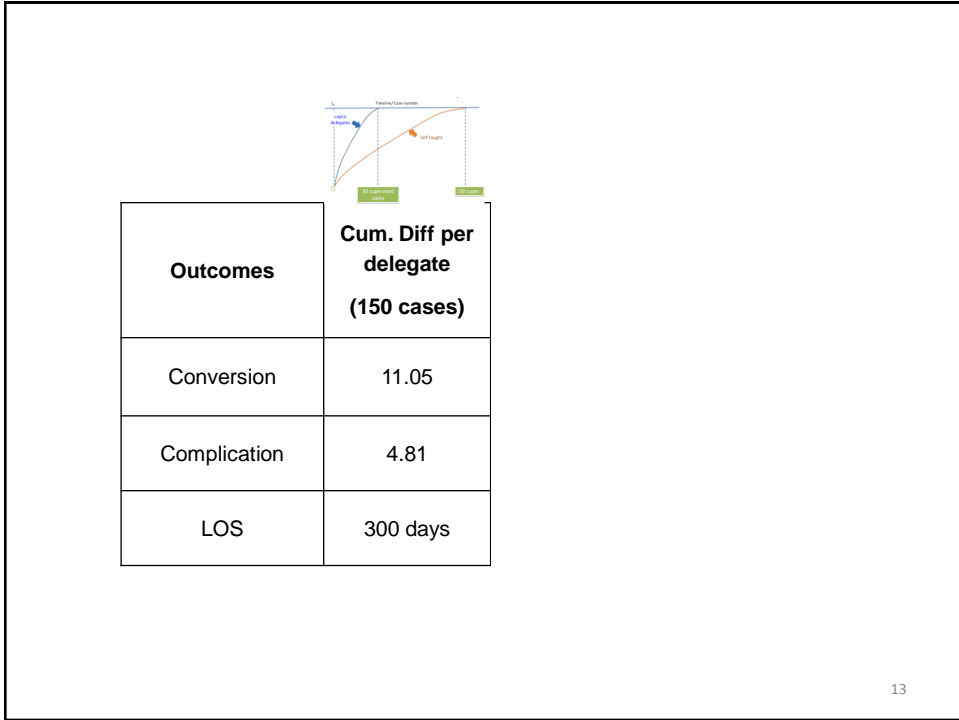
*Direct cost\*\* + Opportunity cost\*\*\**

\* Vonlanthen R et al., The impact of complications on costs of major surgical procedures: a cost analysis of 1200 patients. Ann Surg. 2011 Dec;254(6):907-13.

\*\* [http://www.institute.nhs.uk/quality\\_and\\_service\\_improvement\\_tools/quality\\_and\\_service\\_improvement\\_tools/length\\_of\\_stay.html](http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/length_of_stay.html)

\*\*\* The opportunity cost per LOS (£40) was computed by using the GDP per capita for UK (Internal Monetary Fund 2010, divided by 260 working days a year and times a 30% chance being at work. £40=£35,059/260\*0.30.

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# Acknowledgements

Department of Health  
National cancer action team  
Lapco steering committee

