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**Does Clinical Leadership matter?
Evidence from the English NHS**

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The Background

Widespread drive to engage clinicians in the management of health care organizations (Ham et al., 2011; King's Fund, 2011; 2012)

In the English NHS common at the mid management tier (e.g. clinical directorates), but not clear the extent of clinicians involvement in the strategic direction of service providers, i.e. membership of hospital boards

Despite the trend across health systems to encourage clinical involvement in management there is limited evidence as to what improvements in care or performance might be expected



The Research

Aims

1. To explore the impact that clinical professionals might have on strategic decision making in the English context
2. Contribute to the evidence base with regard to the impact of clinical leadership on the provision of health care services

Questions

Does it make a difference if NHS trusts (i.e. hospitals) involve a greater number of clinicians on their board?

What are the consequences of an increased clinical leadership on different measures of performance?



Data and Methodology

Constructed a governance database using publicly available information covering

4 years of data (2005/6 to 2008/2009)

Focus on the composition of the board of directors (in particular clinicians vs. non clinicians)

Different measures of performance:

- Care Quality Commission ratings ('Quality of Services' and 'Use of Resources')
- Hospital Standardised Mortality Ratios, published by Dr. Foster
- NHS Patient Satisfaction Survey

Methodology: OLS, order logit regression and PCSEs.



Data and Methodology

Organisational and context variables:

- Governance controls
- Hospital size
- Location
- Population served
- Case load
- Waiting times
- Percentage of bed occupancy
- Length of stay in hospital
- Mean age of patients
- Trust status (foundation trust; teaching trust)

Clinical Leadership and Quality

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Dependent Variable: Quality Rating									
CLINICAL	3.081** (1.564)	3.114* (1.636)	3.041* (1.656)	2.704 (1.702)						
DOCTORS					3.763** (1.872)	4.447** (1.908)	4.264** (1.925)	3.930* (2.211)	3.846* (2.206)	
OTHERCL					2.032 (2.254)	1.177 (2.245)	1.215 (2.342)	1.027 (2.336)		0.579 (2.335)
CEOBACK	-0.075 (0.355)	0.003 (0.369)	-0.004 (0.379)	0.176 (0.382)						
CEOBACK_DOC					-0.049 (0.400)	0.052 (0.421)	0.021 (0.447)	0.199 (0.481)	0.216 (0.476)	0.524 (0.434)
CEOBACK_OTH					-0.056 (0.492)	0.045 (0.484)	0.058 (0.488)	0.263 (0.456)	0.379 (0.397)	0.336 (0.447)
BOARDSIZE	1.129 (1.116)	1.607 (1.150)	1.644 (1.153)	0.851 (1.155)	1.078 (1.099)	1.555 (1.134)	1.620 (1.137)	0.845 (1.163)	0.812 (1.143)	0.487 (1.129)
INDEPENDENT	3.148 (2.438)	3.227 (2.468)	3.078 (2.489)	1.443 (2.597)	3.092 (2.508)	3.102 (2.510)	2.958 (2.516)	1.346 (2.617)	1.265 (2.555)	1.390 (2.654)
GENDER	0.304 (1.053)	0.084 (1.055)	0.071 (1.068)	0.210 (1.074)	0.387 (1.068)	0.238 (1.062)	0.217 (1.074)	0.355 (1.074)	0.389 (1.079)	0.152 (1.048)
ATURNOVER		-0.006** (0.003)	-0.005* (0.003)	-0.005* (0.003)		-0.007** (0.003)	-0.007** (0.003)	-0.006** (0.003)	-0.006** (0.003)	-0.004 (0.003)
SIZE		-0.392 (0.251)	-0.408 (0.258)	-0.293 (0.318)		-0.424* (0.248)	-0.435* (0.255)	-0.397 (0.356)	-0.433 (0.342)	-0.302 (0.356)
MEANAGE				0.095 (0.195)				0.034 (0.216)	0.023 (0.214)	0.146 (0.203)
POPSERVED				-0.004 (0.017)				-0.001 (0.018)	0.001 (0.018)	-0.000 (0.018)
FOUNDATION				0.778* (0.422)				0.771* (0.420)	0.771* (0.418)	0.777* (0.418)
TEACHING				0.133 (0.306)				0.164 (0.314)	0.189 (0.307)	0.216 (0.316)
Pseudo R-squared	0.013	0.025	0.039	0.047	0.014	0.026	0.037	0.049	0.048	0.043
Year Dummies	NO	NO	YES	YES	NO	NO	YES	YES	YES	YES
Observations	240	240	240	240	240	240	240	240	240	240

Period: 2006/7-2008/9

Robust standard errors clustered at the hospital trust level in parentheses

** = $p < 0.05$, * = $p < 0.1$

Clinical Leadership and Mortality Rates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Dependent Variable: HSMRs									
CLINICAL	73.364*** (21.007)	67.782*** (19.051)	67.973*** (19.044)	46.744*** (17.560)						
DOCTORS					85.733*** (26.725)	80.714*** (23.747)	79.941*** (23.798)	62.079** (24.004)	60.594** (24.156)	
OTHERCL					43.036 (27.103)	39.973 (25.916)	42.103 (26.119)	20.249 (22.131)		12.788 (18.659)
CEOBACK	-8.522* (4.383)	-7.440* (4.409)	-7.363* (4.410)	-5.851 (4.337)						
CEOBACK_DOC					-11.329* (5.715)	-9.750 (5.928)	-9.525 (5.888)	-6.860 (4.853)	-6.572 (4.770)	-1.855 (4.064)
CEOBACK_OTH					-3.605 (5.549)	-3.277 (5.424)	-3.500 (5.534)	-2.844 (6.341)	-0.484 (5.542)	-1.652 (5.882)
BOARDSIZE	12.750 (8.172)	19.598** (8.580)	19.512** (8.548)	13.936 (8.500)	14.185 (8.677)	20.549** (8.467)	20.418** (8.468)	14.529* (8.400)	13.943 (8.407)	9.490 (8.731)
INDEPENDENT	-2.301 (20.211)	2.828 (21.104)	2.481 (21.199)	1.858 (22.294)	-4.588 (20.181)	0.200 (20.971)	0.036 (21.150)	0.172 (21.933)	-0.543 (21.953)	2.568 (19.798)
GENDER	-12.863 (12.778)	-18.166 (11.812)	-19.052 (11.970)	-10.822 (9.050)	-11.570 (13.509)	-16.579 (11.905)	-17.466 (12.120)	-8.968 (8.934)	-8.292 (8.789)	-12.178 (7.574)
ATURNOVER		0.016 (0.091)	0.019 (0.092)	0.041 (0.064)		0.006 (0.087)	0.009 (0.088)	0.029 (0.059)	0.028 (0.058)	0.064 (0.061)
SIZE		-5.674 (4.728)	-5.673 (4.748)	-4.543 (4.108)		-5.553 (4.824)	-5.561 (4.840)	-5.467 (4.327)	-5.878 (4.222)	-4.239 (3.629)
MEANAGE				0.745** (0.352)				0.774** (0.353)	0.799** (0.351)	0.792*** (0.275)
POPSERVED				3.302 (3.001)				2.569 (3.241)	2.390 (3.249)	4.272* (2.288)
FOUNDATION				-3.059 (3.751)				-3.234 (3.781)	-3.256 (3.780)	-2.725 (2.673)
TEACHING				4.888 (3.195)				5.210* (3.088)	5.633* (3.060)	6.190*** (2.180)
CONSTANT	-139.958*** (24.087)	-121.382*** (32.860)	-119.844*** (32.799)	-170.108*** (43.066)	-141.192*** (23.756)	-121.774*** (33.638)	-120.205*** (33.530)	-160.842*** (43.857)	-154.508*** (42.950)	-162.208*** (43.058)
Ad R-squared	0.098	0.121	0.119	0.230	0.101	0.123	0.120	0.232	0.232	0.191
Year Dummies	NO	NO	YES	YES	NO	NO	YES	YES	YES	YES
Observations	237	237	237	237	237	237	237	237	237	237

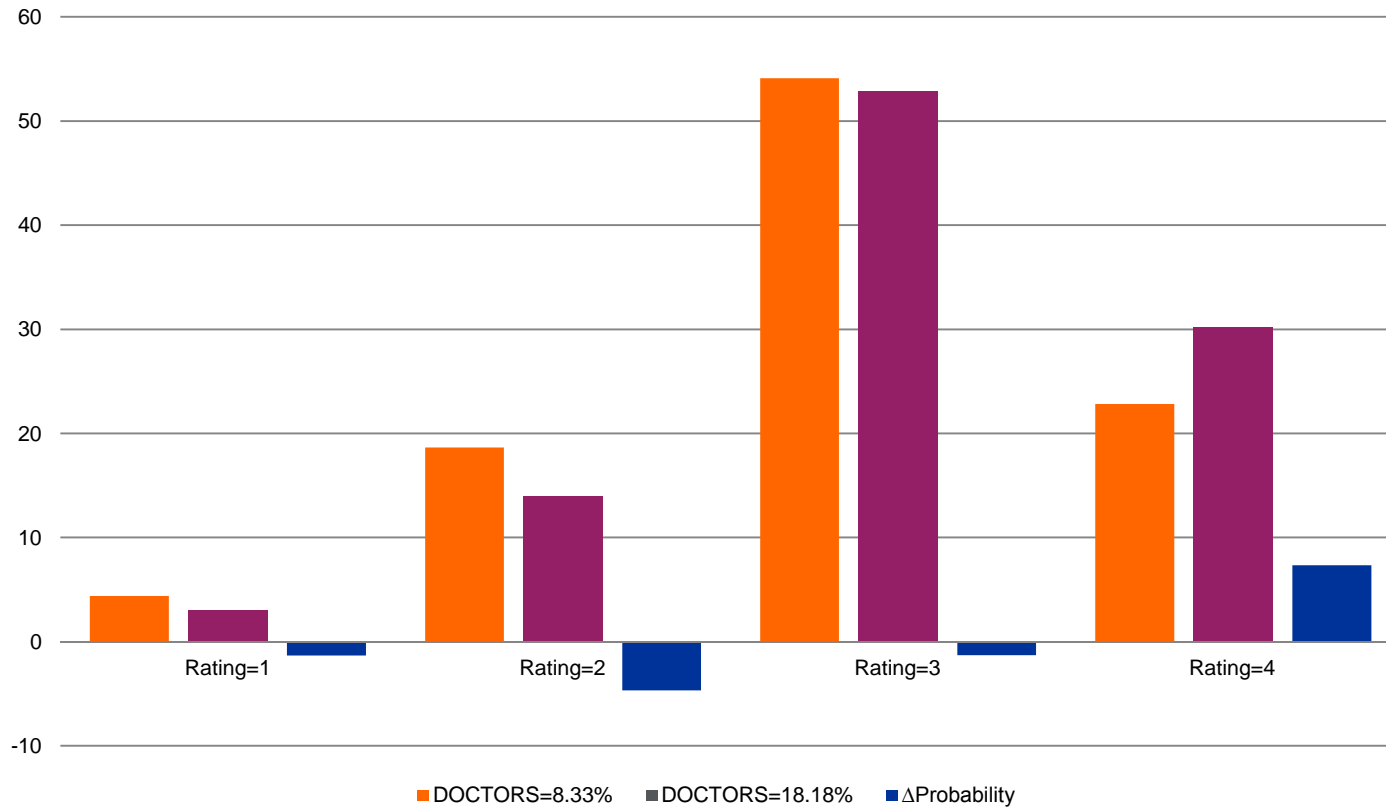
Period: 2006/7-2008/9

Robust standard errors clustered at the hospital trust level in parentheses

*** = $p < 0.10$, ** = $p < 0.05$, * = $p < 0.1$

Economic Impact of Clinical Leadership

Doctors' Directors and Quality Ratings



Clinical Leadership and Efficiency

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable: Financial Rating					
CLINICAL	3.268 (2.506)					
DOCTORS		3.626* (2.171)	4.096* (2.372)	4.119* (2.439)	4.823* (2.480)	5.260* (2.713)
OTHERCL		1.509 (3.082)	1.264 (3.076)	1.250 (3.071)	0.717 (3.200)	0.718 (4.310)
CEOBACK	-0.167 (0.453)					
CEOBACK_DOC		-0.835* (0.474)	-0.796 (0.488)	-0.818* (0.492)	-0.799 (0.493)	-0.122 (0.675)
CEOBACK_OTH		-0.813 (0.604)	-0.807 (0.598)	-0.793 (0.587)	-0.701 (0.604)	-0.072 (0.656)
BOARDSIZE	2.082 (1.355)	4.045*** (1.082)	4.156*** (1.162)	4.215*** (1.173)	4.253*** (1.170)	2.049 (1.323)
INDEPENDENT	2.021 (2.973)	7.700** (3.037)	7.618** (3.016)	7.521** (3.063)	7.494** (3.078)	2.132 (3.052)
GENDER	0.462 (1.596)	0.813 (1.382)	0.895 (1.533)	0.889 (1.545)	1.070 (1.651)	0.737 (1.740)
ATURNOVER	0.008 (0.007)		-0.004 (0.006)	-0.004 (0.007)	-0.004 (0.007)	0.005 (0.006)
SIZE	0.035 (0.488)		-0.096 (0.275)	-0.096 (0.275)	-0.288 (0.353)	-0.165 (0.474)
MEANAGE	0.006 (0.017)				0.011 (0.015)	0.012 (0.018)
POPSERVED	0.154 (0.207)				-0.139 (0.165)	0.067 (0.205)
FOUNDATION	4.005*** (0.464)					4.002*** (0.467)
TEACHING	0.265 (0.367)					0.357 (0.380)
Year Dummies	YES	NO	NO	YES	YES	YES
Observations	240	240	240	240	240	240

Period: 2006/7-2008/9

Robust standard errors in parentheses

*** = $p < 0.10$, ** = $p < 0.05$, * = $p < 0.1$

Clinical Leadership and Patient Satisfaction

Variable	Dependent Variable					
	All Round	Access	Coordination	Information	Relationships	Comfort
Doctor Directors (%)	0.026***(0.005)	-0.012 (0.011)	0.027* (0.016)	0.055***(0.014)	0.021 (0.014)	0.050***(0.007)
Nurse/AHP Directors (%)	0.009 (0.012)	-0.017 (0.030)	0.020* (0.011)	0.061* (0.035)	-0.013* (0.006)	0.015 (0.015)
CEO- Doctor	-0.184 (0.144)	1.039***(0.281)	-0.533 (0.666)	-0.253 (0.361)	-0.473***(0.147)	-0.413** (0.210)
CEO- Nurse/AHP	0.383***(0.115)	1.863***(0.527)	-0.651** (0.307)	-0.819***(0.219)	0.404 (0.425)	0.322***(0.037)
CHAIR- Doctor	-0.383* (0.210)	-0.062 (0.340)	-0.701***(0.239)	-1.129* (0.619)	-0.382** (0.168)	-0.814***(0.140)
CHAIR- Nurse/AHP	0.064 (0.138)	-0.083 (0.563)	0.491 (0.602)	0.034 (0.484)	-0.357 (0.219)	-0.310 (0.481)
<i>Board Controls</i>						
Number of Directors	0.021 (0.015)	0.062** (0.028)	0.146***(0.027)	-0.168***(0.021)	-0.064***(0.023)	-0.062 (0.067)
Non-exe. Directors (%)	0.036***(0.005)	0.013* (0.007)	0.061***(0.007)	0.031 (0.021)	0.002 (0.013)	0.051***(0.012)
Female Directors (%)	-0.002 (0.004)	-0.022***(0.005)	-0.000 (0.004)	-0.001 (0.005)	-0.006 (0.006)	-0.002 (0.007)
<i>Hospital Controls</i>						
Organisation Size	-0.001***(0.000)	-0.001***(0.000)	-0.001***(0.000)	-0.001***(0.000)	-0.001* (0.000)	-0.001***(0.000)
Case Load	-0.007* (0.004)	0.008* (0.004)	-0.020 (0.017)	-0.002 (0.005)	-0.016***(0.005)	-0.009** (0.004)
Population Age	-0.000 (0.011)	0.035***(0.011)	-0.025** (0.011)	0.050* (0.028)	0.007 (0.022)	0.004 (0.006)
Waiting Time	-0.023***(0.004)	-0.023***(0.008)	-0.011***(0.004)	-0.035***(0.007)	-0.005 (0.005)	-0.018***(0.004)
Severity of Cases	-0.030 (0.062)	0.080 (0.059)	-0.069** (0.034)	-0.048***(0.008)	0.002 (0.024)	-0.085 (0.073)
Bed Occupancy (%)	-0.025** (0.010)	-0.080***(0.015)	-0.051***(0.008)	-0.056** (0.026)	-0.045***(0.014)	-0.036** (0.017)
Quality - Excellent	0.189 (0.145)	0.415** (0.205)	0.764***(0.200)	1.149***(0.400)	0.267***(0.042)	-0.171***(0.042)
Financial Man. - Excellent	0.350* (0.178)	0.805***(0.114)	0.360** (0.165)	0.466 (0.321)	0.690***(0.157)	0.343***(0.088)
Organisation Status	-0.195 (0.258)	-0.392 (0.258)	-0.630** (0.261)	0.281 (0.334)	-0.469** (0.225)	-0.035 (0.251)
Organisation Reputation	0.241* (0.140)	0.318***(0.111)	0.207 (0.235)	0.733***(0.182)	0.126 (0.219)	0.224 (0.161)
Regional Dummies	YES	YES	YES	YES	YES	YES
No. of observations	232	232	232	232	232	232
Wald chi2	27.73***	16.63***	29.02***	17.88***	130.92***	116.27***

* = Significant at the 10% level (p<0.10) ** = Significant at the 5% level (p<0.05) *** = Significant at the 1% level (p<0.01) Standard Errors in brackets. Regional dummies are omitted for space reasons. All estimations include a constant and first lags of dependent variables.



Key Findings

Increasing the number of clinicians in board roles *significantly* increases organisational performance, measured in terms of Care Quality Commission **quality and efficiency ratings**, lower **morbidity rates** and increased **patient satisfaction**

Specifically, the percentage of doctors on the board is a *positive* and *significant* determinant of better organisational performance

The number of board members with nursing and allied health professional backgrounds is less clearly associated with improved performance outcomes



Explanation

‘Heroic’ leadership less important than ‘distributed’ leadership

Increased **understanding and better **communication** through clinicians involvement at the board level**

Clinical leadership provides **legitimacy and **credibility**, i.e. bridges gap between organisation and clinicians**

Clinicians bring **specialist knowledge and **political capital** to the strategic decision-making process**



Implications for Future Research

The study shows the positive impact of clinical leadership on the service provided (WHY) but it does not explain the reasons for it (HOW)

The study focuses on the English NHS, there is a clear opportunity to extend the analysis to other COST countries and beyond

It would be also worth to understand what is the impact of clinical engagement at the mid management tier



Implications for Policy Makers

Current policies encouraging the involvement of clinicians in managerial roles seem to generate better organisational performance

Research is needed to further investigate and extend the significance of the findings

Investments in knowledge and capacity building within the COST network are producing valuable outcomes