

The Impact of Accreditation on Measurable Adherence to Clinical Guidelines – a natural experiment in Denmark.

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Several studies of the effect of accreditation on effectiveness of care

Title	Time of publ.	Accr.-org.	Effect +/-
Structural versus Outcomes Measures in Hospitals: A Comparison of Joint Commission and Medicare Outcomes Scores in Hospitals	2002	JCAHO	-
JCAHO Accreditation and Quality of Care for Acute Myocardial Infarction – A higher JCAHO accreditation level did not necessarily guarantee higher-quality care or better outcomes in the management of AMI	2003	JCAHO	+
Relationship Between Performance Measurement and Accreditation: Implications for Quality of Care and Patient Safety	2005	JCAHO	-
Quality of Care in Accredited and Non-accredited Ambulatory Surgical Centres	2008	JCAHO	-
National Committee on Quality Assurance Health-Plan Accreditation: Predictors, Correlates of Performance, and Market Impact	2002	NCQA	+
Medication Errors Observed in 36 Health Care Facilities	2002	JCAHO	-
Do Quality Improvement Organizations Improve the Quality of Hospital Care for Medicare Beneficiaries?	2005	Federal US	-
A prospective, multi-method, multi-disciplinary, multi-level collaborative, social-organisational design for researching health sector accreditation (LP0560737)	2006	AU	+

Methodological issues

- Cross-sectional studies
- Mainly describing US/JCAHO experience
- All performed in healthcare systems with well-established accreditation schemes
- Effectiveness assessed by a very limited range of indicators

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Quality Improvement Denmark : 2001 →

- Nationally: Decision to implement a National Performance Measurement system
- Regionally: hospitals in one county accredited by JCI

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- Accreditation strongly support the implementation of guidelines in hospitals therefore adherence to evidence-based processes would be expected to increase with accreditation
- In view of the uniformity of Danish Hospitals: Basis for evaluation of accreditation in terms of effectiveness

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The Danish National Indicator Project: Basic principles

- Evidence-based standards and indicators for 8 major diseases developed in a highly structured process – closely related to National Guideline formulation
- Mandatory for all hospitals
- Results audited and published in a highly structured process

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Study design

- Intervention group: county with accredited hospitals treating 15-20 % of Danish patients
- Control group: counties without accredited hospitals
- Effectiveness assessed by four disease-specific indicator sets – two different composites of process indicators from DK-NIP

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Data collection period, 2003-2008

• Four Diseases

- Stroke
- Schizophrenia
- Acute surgery – upper GI bleeding
- Heart failure

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Process quality composites – two perspectives on adherence to evidence-based guidelines

- Proportion of recommended care provided
 - McGlynn E.A et al., "The Quality of Health Care Delivered to Adults in the United States", *N Engl J Med* 348:2635,2003
- All-or-None: Proportion of patients receiving optimum care as defined by the indicators
 - Nolan T, Berwick DM., "All-or-none measurement raises the bar on performance", *JAMA* 2006 Mar 8; 295(10):1168-70

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Stroke

Proportion of recommended care provided to patients with 95 % confidence limits	2003		2008	
	JCI-accredited county	Non-participating counties	JCI-accredited counties	Non-participating counties
Stroke, All-or-None	0.07 (0.05-0.09)	0.12 (0.11-0.13)	0.22 (0.20-0.25)	0.39 (0.38-0.40)
Stroke, proportion of recommended care provided	0.50 (0.48-0.51)	0.52 (0.51-0.52)	0.59 (0.58-0.60)	0.77 (0.77-0.77)

P-values on improvement from 2003-2008. JCI-accredited county: P<0.01;
Non-participating counties: P<0.01

Stroke - percentage of patients receiving complete package (All-or-None)

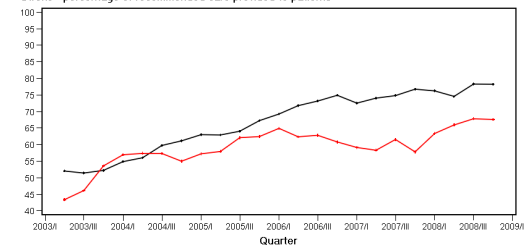


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Stroke - percentage of recommended care provided to patients



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Improvement				
Rate of change from 2003 to 2008 Red=significant change from 2003 to 2008	All-or-None		Proportion of recommended care provided	
	JCI-accredited county	Non-participating counties	JCI-accredited counties	Non-participating counties
Stroke	0.15	0.27	0.09	0.25
Schizophrenia	0.07	0.14	0.14	0.16
Bleeding ulcer	0.06	0.03	0.08	0.05
Heart failure	0.03	0.05	0.08	0.15

Conclusions

- Guideline adherence improved significantly during a 4-5 year observation period
- However
 - No additional effect of accreditation on adherence was observable

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