

Practice nurse staffing and the quality of chronic disease care – a real effect or just a proxy for organisational factors?

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Funders

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- **The views expressed are not necessarily those of the Department**

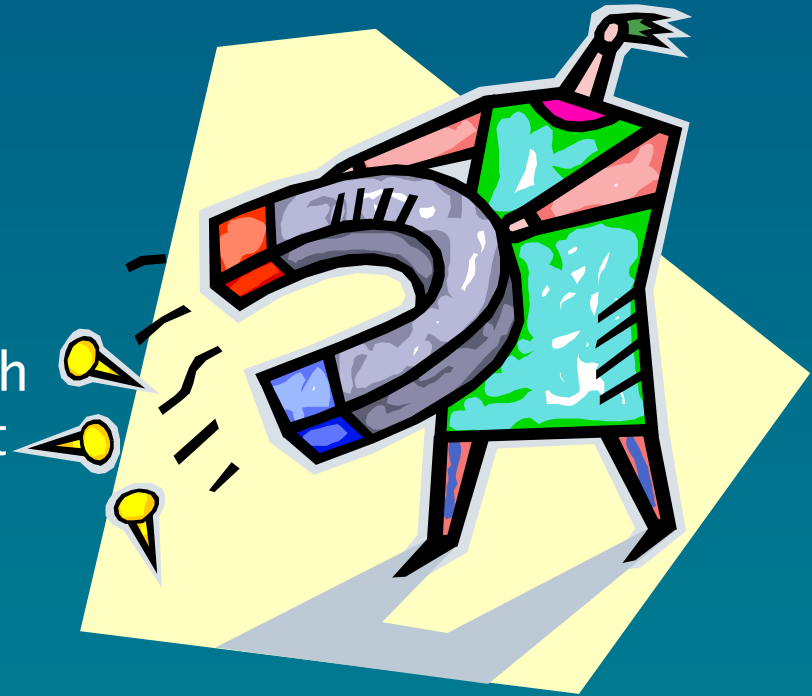
...in acute care

- higher staffing levels associated with better outcomes
 - Aiken, Needleman, Kane, Rafferty

- organisational factors associated with better care quality
 - West, Aiken, Kazanijan

The magnet effect

- ‘magnet hospital’
- Defined by number of organisational characteristics including leadership and management of the clinical (nursing) team, relationships with doctors (physicians) and support for education and training of nursing staff (Aiken 1996)
- Magnet hospitals have
 - Better staffing
 - Better patient outcomes



Dr Crippen:

- “Only in our points–obsessed system could nurses be 'better' than doctors”
- “Nurses are now busy sitting in offices endlessly filling in forms to prove that care has never been better”
- The Guardian, Tuesday 19 January 2010

Significant associations between nurse staffing chronic disease management in primary care

Routine data from 8000+ English general practices
($P < 0.05$)

Quality (QoF)

- COPD
- CHD/LVD
- Diabetes
- Hypertension
- Hypothyroidism

Griffiths et al British Journal of General Practice **60(1): e36–e48.**

Multiple unplanned admissions

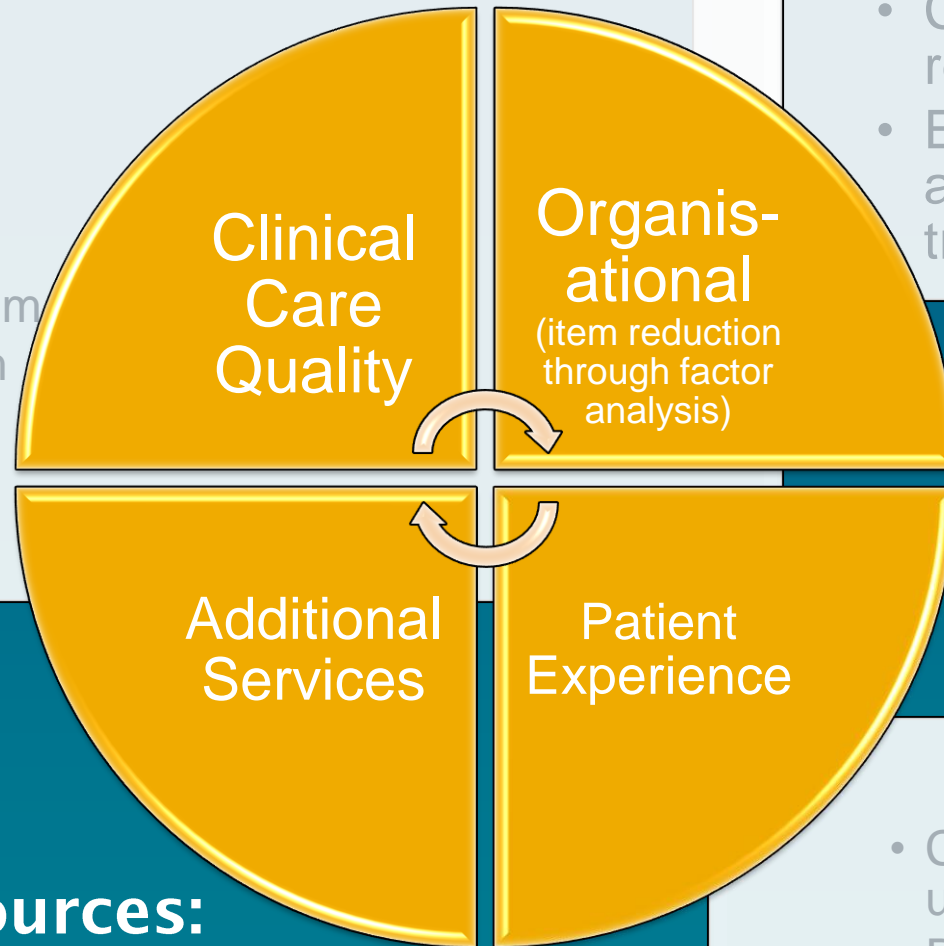
- Asthma
- COPD

Griffiths, et al. (2010). BMC Health Services Research **10(276):**

Research Questions

- Are there associations between nurse staffing levels and quality of care in English General Practice *when organisational quality is taken into account?*
- Does the effect of organisational quality vary with staffing level (interaction)?

- Asthma
- Cancer
- COPD
- CHD / LVD
- Diabetes
- Epilepsy
- Hypertension
- Hypothyroidism
- Mental Health
- Stroke



- Clinical recording
- Education and training

- Conducting user surveys
- Responding to results

Data sources:
Quality and Outcomes Framework (QOF) 2005/6

(www.ic.nhs.uk/services/qof)

Geographic Area /

Density (people per hectare 2001)

Index of Multiple Deprivation

Good self-rated health(%)

Office of National Statistics

Office of National Statistics

Office of National Statistics

Patients

≤15 Yr of age(%)

≥65 Yr of age(%)

Female(%)

Member of racial or ethnic minority(%)

National Primary Care R & D Centre,

National Primary Care R & D Centre,

National Primary Care R & D Centre,

National Primary Care R & D Centre,

Disease prevalence

Unadjusted prevalence

NHS Information Centre

Practice

Practice Nurses

Size of practice population

List size per FTE GP

Single Handed Practice

Primary Medical Services Contract

NHS Workforce Benchmarking /

Binley's

National Primary Care R & D Centre,

National Primary Care R & D Centre,

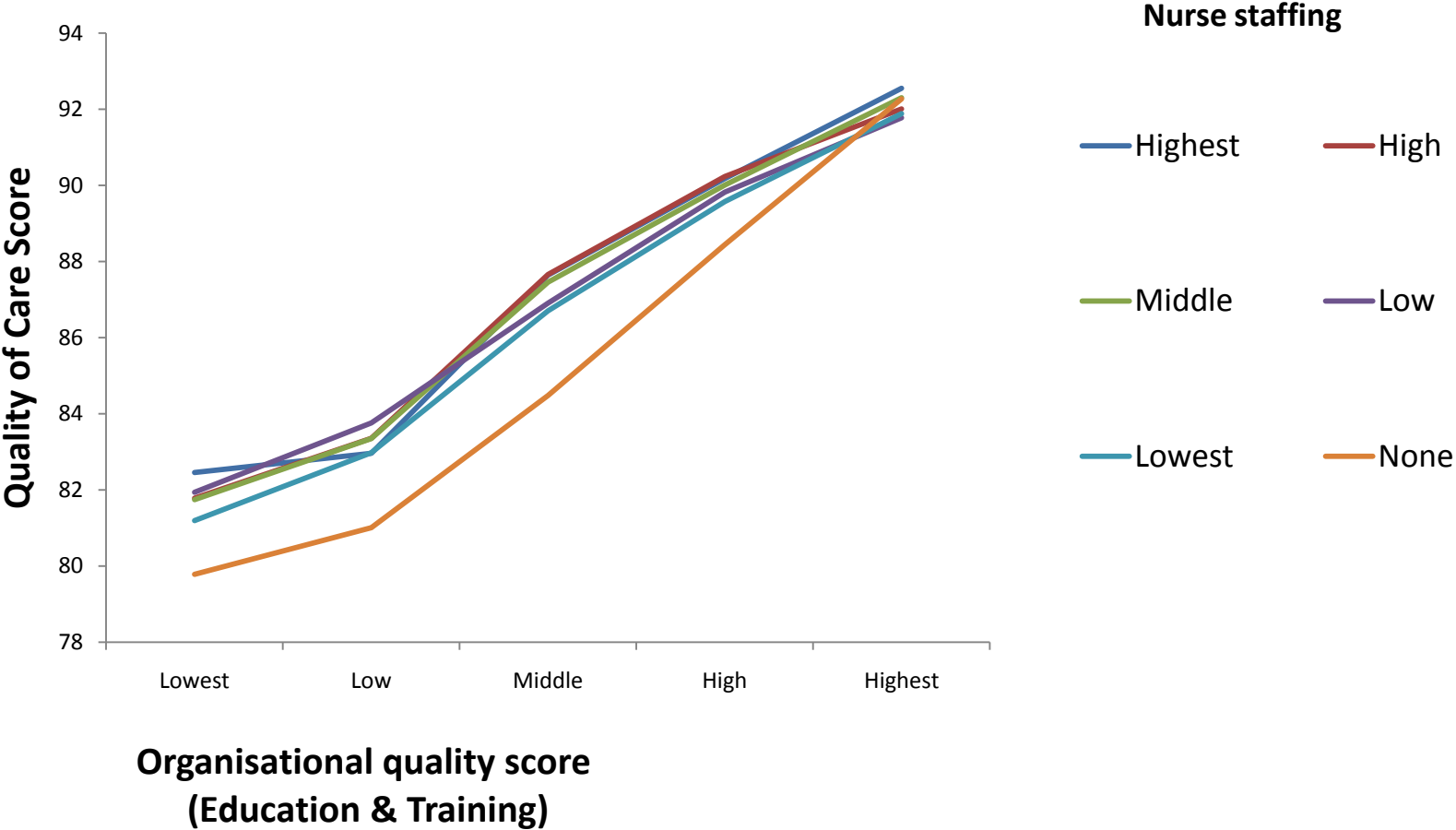
National Primary Care R & D Centre,

National Primary Care R & D Centre,

Main results:

- Significant global effect of practice nurse staffing ($p < .001$).
- Practice nurse staffing positively associated ($p < 0.01$) with quality of care for
 - COPD
 - CHD
 - Diabetes
 - Hypothyroidism
- No association between quality of care and list size per full-time equivalent GP ($p > 0.05$).
- Clinical recording, education and training and making more use of the patient survey were significantly and positively associated with quality ($p < .001$) for all clinical conditions.

Interactions: effect of nurse staffing X education and training quality on diabetes care (p<0.001)



Conclusions

- The association between nurse staffing and clinical quality is NOT just a “halo” effect
- Better Nurse staffing is associated with better clinical care
- As in acute care, quality of organisation has a stronger effect than staffing level