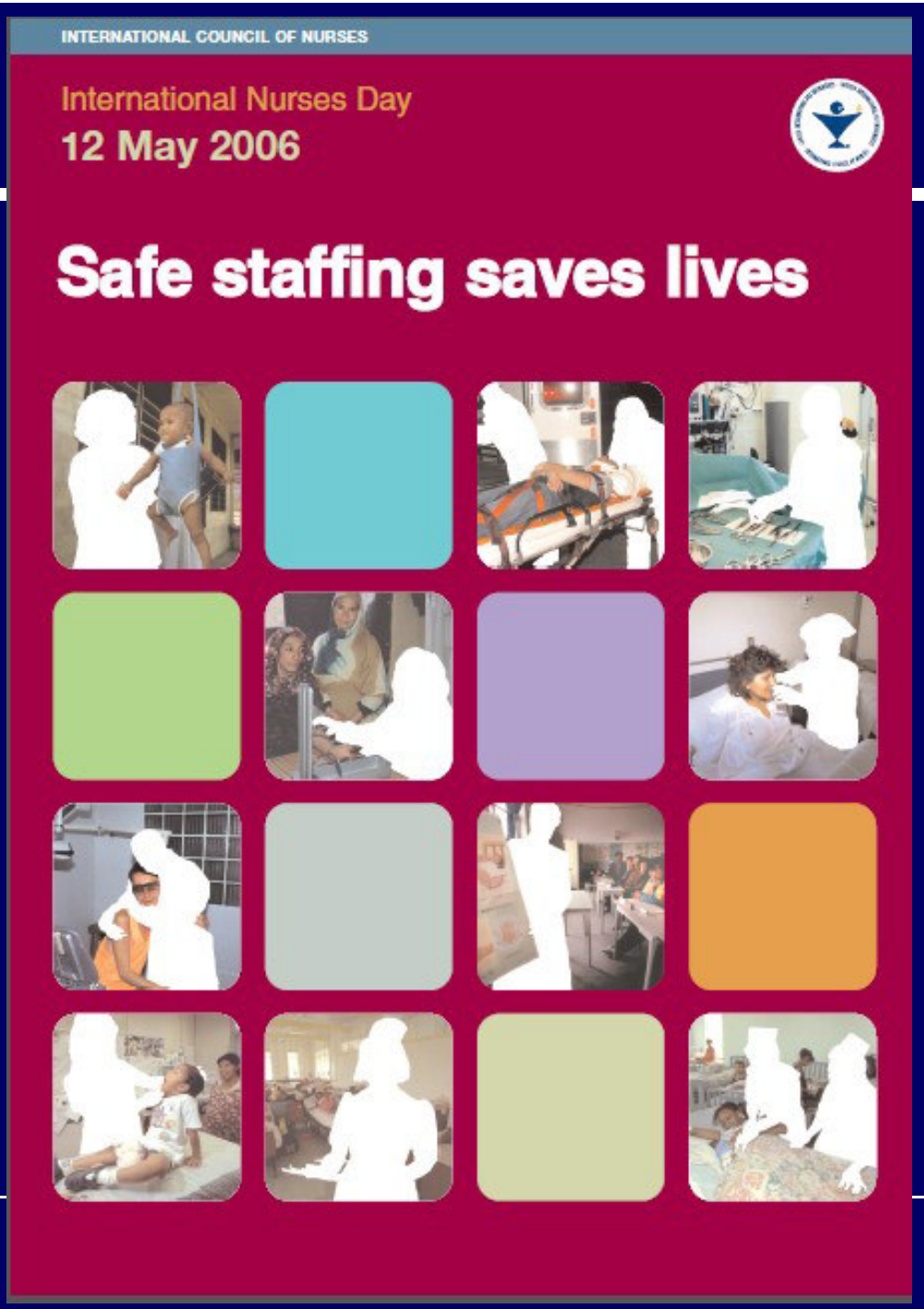
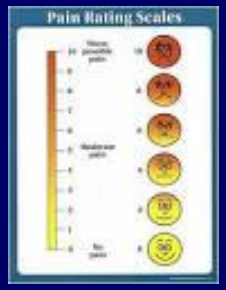
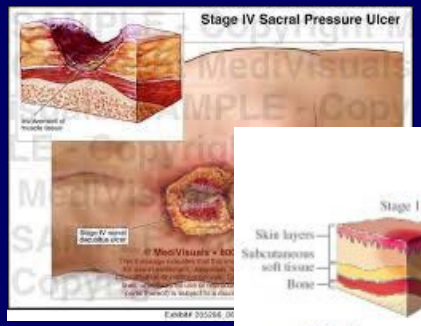


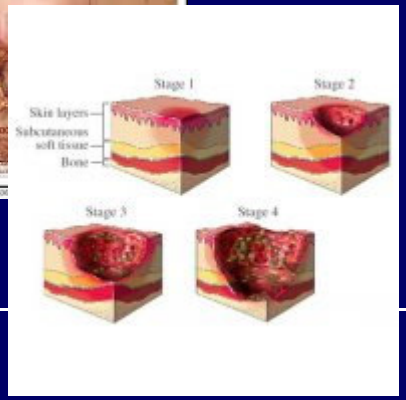
Corso di Laurea in
Infermieristica di Modena

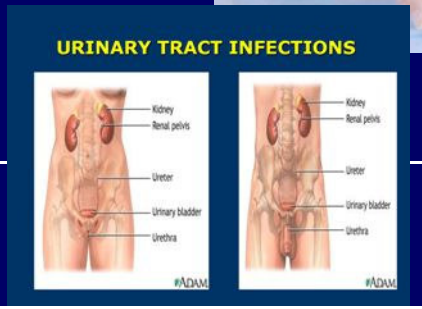
Paola Ferri

Quali sono gli esiti sui quali influisce l'organico inf.co?









Staffing

Ricerca organizzativa

Se accettiamo che esistano esiti misurabili dell'effetto di una professione sui suoi assistiti, assumiamo che il professionista sia una variabile e che sia possibile ricercare la relazione fra questa (intervento o variabile indipendente) e ciò che accade (variabile dipendente o esito) agli esposti (i pazienti)

(Palese, 2008).

Con Aiken e Needleman l'infermieristica è stata associata alla mortalità e alle complicanze dei pazienti.

Linda H. Aiken, PhD, RN, FAAN, FRCN is the Director of the Center for Health Outcomes and Policy Research, and Professor of Nursing and Sociology at the University of Pennsylvania, Philadelphia

Jack Needleman, PhD, FAAN, is currently Professor of Health Services in the Department of Health Services at the University of California, Los Angeles (UCLA)

Hospital Nurse Staffing and Patient Mortality, Nurse Burnout, and Job Dissatisfaction

Linda H. Aiken, PhD, RN
Sean P. Clarke, PhD, RN
Douglas M. Sloane, PhD
Julie Sochalski, PhD, RN
Jeffrey H. Silber, MD, PhD

Context The worsening hospital nurse shortage and recent California legislation mandating minimum hospital patient-to-nurse ratios demand an understanding of how nurse staffing levels affect patient outcomes and nurse retention in hospital practice.

Objective To determine the association between the patient-to-nurse ratio and patient mortality, failure-to-rescue (deaths following complications) among surgical patients, and factors related to nurse retention.

THE PAST DECADE HAS BEEN A TUR-

JAMA, 2002.

Design, Setting, and Participants Cross-sectional analyses of linked data from 10184 staff nurses surveyed, 232342 general, orthopedic, and vascular surgery patients discharged from the hospital between April 1, 1998, and November 30,

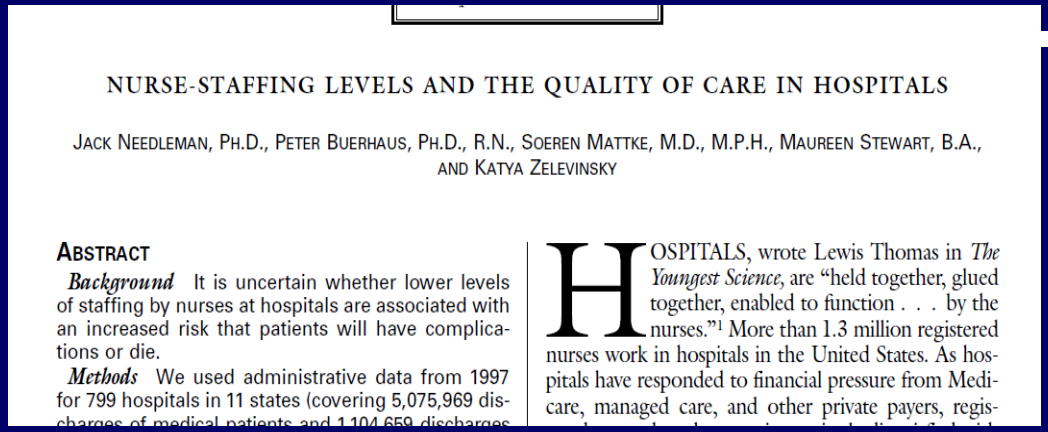
Outcome misurati:

- Mortalità e mancato soccorso entro 30 giorni
- Insoddisfazione sul lavoro
- Burnout

Risultati:

Ogni paziente in più assistito da un'infermiera comporta:

- > del 7% del rischio di mortalità e di mancato soccorso
- > del 23% della probabilità di incorrere nel burnout
- > del 15% della probabilità di provare insoddisfazione al lavoro



NURSE-STAFFING LEVELS AND THE QUALITY OF CARE IN HOSPITALS

JACK NEEDLEMAN, PH.D., PETER BUERHAUS, PH.D., R.N., SOEREN MATTKE, M.D., M.P.H., MAUREEN STEWART, B.A., AND KATYA ZELEVINSKY

ABSTRACT

Background It is uncertain whether lower levels of staffing by nurses at hospitals are associated with an increased risk that patients will have complications or die.

Methods We used administrative data from 1997 for 799 hospitals in 11 states (covering 5,075,969 dis-

HOSPITALS, wrote Lewis Thomas in *The Youngest Science*, are "held together, glued together, enabled to function . . . by the nurses."[1] More than 1.3 million registered nurses work in hospitals in the United States. As hospitals have responded to financial pressure from Medicare, managed care, and other private payers, regis-

N Engl J Med, 2002.

Risultati:

Un aumento delle ore erogate dagli infermieri si traduce in:

- < durata della degenza nei pazienti internistici;
- < delle infezioni vie urinarie;
- < dei sanguinamenti del tratto GI superiore;
- < polmoniti, episodi di shock, arresto cardiaco ed episodi di mancato soccorso.

REVIEW ARTICLE

The Association of Registered Nurse Staffing Levels and Patient Outcomes

Systematic Review and Meta-Analysis

Robert L. Kane, MD, Tatyana A. Shamliyan, MD, MS,* Christine Mueller, PhD, RN,† Sue Duval, PhD,* and Timothy J. Wilt, MD, MPH‡*

Objective: To examine the association between registered nurse (RN) staffing and patient outcomes in acute care hospitals.
Study Selection: Twenty-eight studies reported adjusted odds ratios of patient outcomes in categories of RN-to-patient ratio, and met inclusion criteria. Information was abstracted using a standardized protocol.
Data Synthesis: Random effects models assessed heterogeneity and pooled data from individual studies. Increased RN staffing was associated with lower hospital related mortality in intensive care units (ICUs) [odds ratios (OR), 0.91; 95% confidence interval (CI), 0.86–0.96], in surgical (OR, 0.84; 95% CI, 0.80–0.89), and in medical patients (OR, 0.94; 95% CI, 0.94–0.95) per additional full time equivalent per patient day. An increase by 1 RN per patient day was associated with a decreased odds ratio of hospital acquired pneumonia (OR, 0.70; 95% CI, 0.56–0.88), unplanned extubation (OR, 0.49; 95% CI, 0.36–0.67), respiratory failure (OR, 0.40; 95% CI, 0.27–0.59), and cardiac arrest (OR, 0.72; 95% CI, 0.62–0.84) in ICUs, with a lower risk of failure to rescue (OR, 0.84; 95% CI, 0.79–0.90) in surgical patients. Length of stay was shorter by 24% in ICUs (OR, 0.76; 95% CI, 0.62–0.94) and by 31% in surgical patients (OR, 0.69; 95% CI, 0.55–0.86).
Conclusions: Studies with different design show associations between increased RN staffing and lower odds of hospital related mortality and adverse patient events. Patient and hospital characteristics, including hospitals' commitment to quality of medical care, likely contribute to the actual causal pathway.

Nurses are crucial to providing high-quality care.[1–3] Hospital restructuring in the last 2 decades, in response to the advent of managed care and diagnosis-related groups, shortened hospitalizations of acutely ill patients and placed new stresses on nurses to provide safe patient care.[4–6] Increasing the nurse-to-patient ratios has been recommended as a means to improve patient safety.[7–9] California is the only state that has mandatory nurse-to-patient ratios, although mandatory nurse staffing legislation has been proposed in several other states[10,11] as well as all Medicare participating hospitals.[12] However, these mandatory staffing regulations are not supported by evidence-based optimal nurse-to-patient ratios.[13]

We undertook a systematic review of the extant literature on the association between registered nurse (RN)-to-patient ratios, and outcomes. These ratios have been expressed in 2 different ways.[14] One method uses a ratio of full time equivalents (FTEs) of RNs per patient day, whereas the second uses the number of patients assigned to 1 RN per shift in the unit (see Appendix A which can be found on the Medical Care website, www.lww-medicalcare.com). This study is part of a larger evidence report conducted for the Agency for Healthcare Research and Quality (AHRQ) to examine several key questions related to nurse staffing and patient outcomes in acute care hospitals. The full report can be found at http://www.ahrq.gov/clinic/evrptpdfs.htm.

METHODS

Medical Care, 2007.

Risultati:

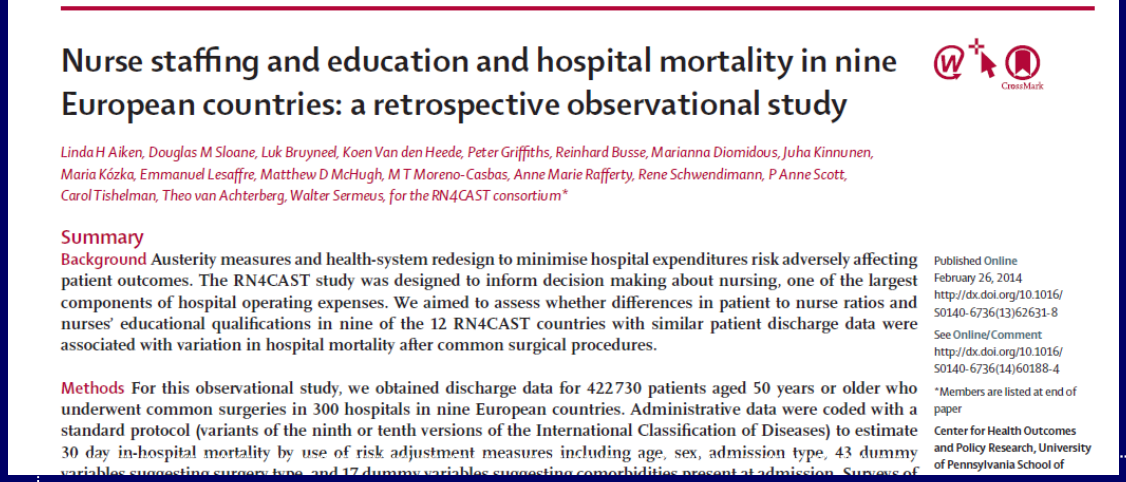
Un aumento di un paziente per ogni infermiere provoca,

relativamente alla mortalità:

- > 9% del rischio di morte in terapia intensiva,
- > 16% del rischio di morte in chirurgia,
- > 6% del rischio di morte in medicina,

relativamente agli **eventi avversi:**

- > polmoniti acquisite in ospedale, estubazioni accidentali, insufficienze respiratorie nei pazienti chirurgici, arresti cardiaci, mancato soccorso, > del 24% della durata della degenza in TI e del 31% in chirurgia.



Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study

*Linda H Aiken, Douglas M Sloane, Luk Bruyneel, Koen Van den Heede, Peter Griffiths, Reinhard Busse, Marianna Diomidous, Juha Kinnunen, Maria Kózka, Emmanuel Lesaffre, Matthew D McHugh, M T Moreno-Casbas, Anne Marie Rafferty, Rene Schwendimann, P Anne Scott, Carol Tishelman, Theo van Achterberg, Walter Sermeus, for the RN4CAST consortium**

Summary

Background Austerity measures and health-system redesign to minimise hospital expenditures risk adversely affecting patient outcomes. The RN4CAST study was designed to inform decision making about nursing, one of the largest components of hospital operating expenses. We aimed to assess whether differences in patient to nurse ratios and nurses' educational qualifications in nine of the 12 RN4CAST countries with similar patient discharge data were associated with variation in hospital mortality after common surgical procedures.

Methods For this observational study, we obtained discharge data for 422730 patients aged 50 years or older who underwent common surgeries in 300 hospitals in nine European countries. Administrative data were coded with a standard protocol (variants of the ninth or tenth versions of the International Classification of Diseases) to estimate 30 day in-hospital mortality by use of risk adjustment measures including age, sex, admission type, 43 dummy variables suggesting surgery type, and 17 dummy variables suggesting comorbidities present at admission. Surveys of

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*Members are listed at end of paper
Center for Health Outcomes and Policy Research, University of Pennsylvania School of

The Lancet, 2014.

Risultati:

- Ogni paziente da assistere in più aumenta la probabilità di mortalità a 30 giorni del 7%;
- Un aumento del 10% del personale formato con laurea di primo livello *è associato ad una diminuzione del rischio di mortalità del 7%.*

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Associations of patient safety outcomes with models of nursing care organization at unit level in hospitals

CARL-ARDY DUBOIS[1], DANIELLE D'AMOUR[1], ERIC TCHOUAKET[2], SEAN CLARKE[3], MICHÈLE RIVARD[4] AND RÉGIS BLAIS[5]

[1]Faculty of Nursing, University of Montreal, Montreal, Canada, [2]Université du Québec en Outaouais, Canada, [3]School of Nursing, McGill University, Canada, [4]Department of Social and Preventive Medicine, Faculty of Medicine, University of Montreal, Montreal, Canada, and [5]Department of Health Administration, Faculty of Medicine, University of Montreal, Montreal, Canada

Address reprint requests to: Carl-Ardy Dubois, Université de Montréal, CP 6128, succ. Centre-ville, H3C 3J7 Montréal, Quebec, Canada. Tel: +514-343-7293; Fax: +514-343-2306; E-mail: carl.ardy.dubois@umontreal.ca

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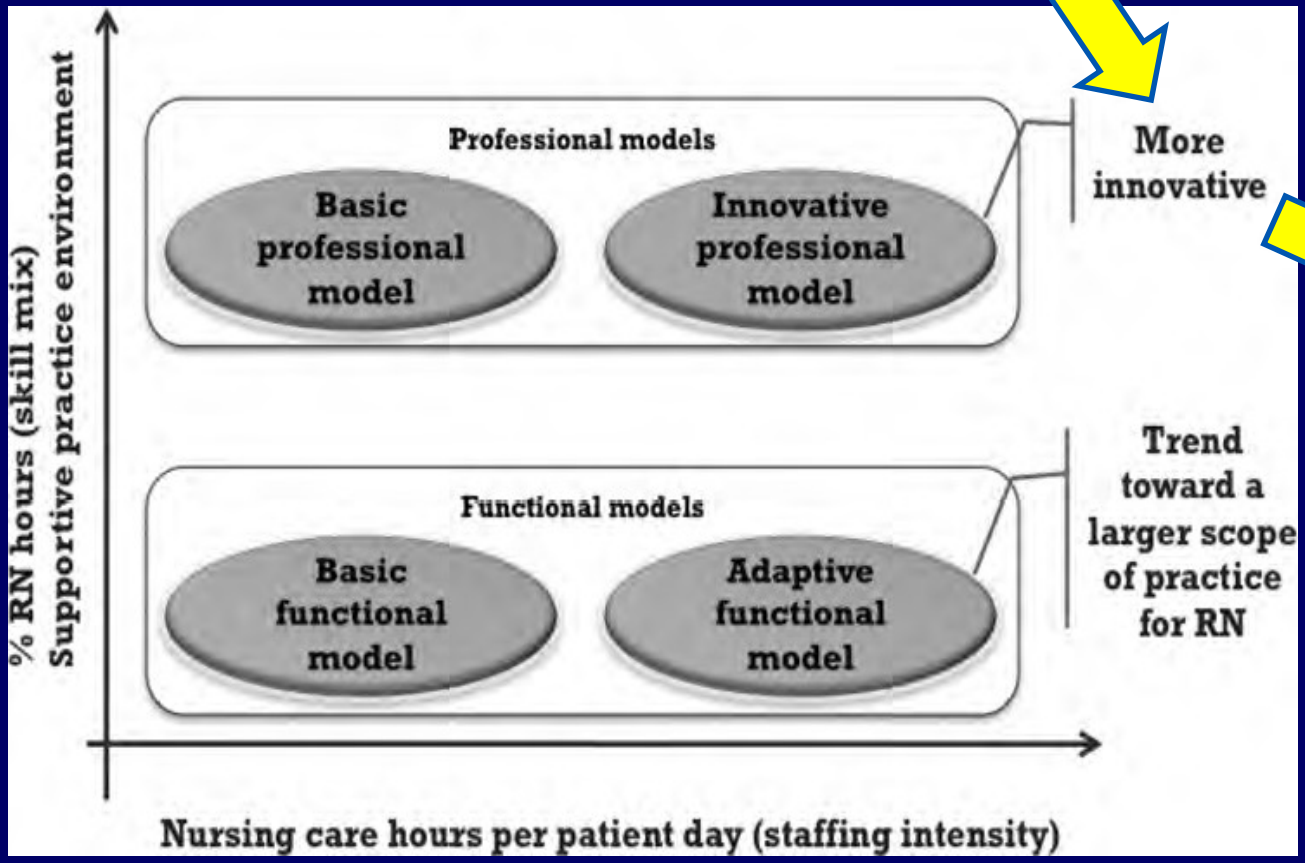

Nei reparti con modelli professionali <u>innovativi</u> si osserva una <u>riduzione</u> della frequenza di:

- Errori di terapia
- Cadute
- Polmoniti
- IVU
- Contenzioni
- LdP

Recommendations

1. Planning for nurse staffing on wards is undertaken in every ward in every hospital, supported by evidence-based tools and/or methodologies to set core establishments sufficient to maintain safe nurse to patient ratios.
2. Ward sisters (or equivalent) are empowered to make day-to-day decisions on staffing and resource levels with the authority to act on those decisions.
3. Ward sisters and nurse managers are supported by the director of nursing and trust board. The trust board must be accountable for staffing levels being maintained at the calibrated safe and appropriate levels.
4. Under no circumstances is it safe to care for patients in need of hospital treatment with a ratio of more than eight patients per registered nurse during the day time on general acute wards, including those specialising in care for older people.
5. If registered nurse staffing falls below a ratio of one nurse to eight patients (excluding the nurse in charge) it is a requirement that this be reported and recorded. There is evidence that risk of harm to patients is substantially increased at these staffing levels.
6. Trusts are required to report the frequency of such incidents publicly and to take immediate action to remedy the breach. If breaches occur regularly, this must be escalated through the trust's risk management systems.
7. Registered nurses must at all times be supported by a sufficient number of healthcare assistants and a senior registered nurse in charge of the ward.

SAFE STAFFING ALLIANCE CONSENSUS STATEMENT

Under no circumstances is it safe to care for patients in need of hospital treatment with a ratio of more than eight patients per registered nurse during the day time on general acute wards, including those specialising in care for older people.

If registered nurse staffing falls below a ratio of one nurse to eight patients (excluding the nurse in charge) it is a requirement that this be reported and recorded. There is evidence that risk of harm to patients is substantially increased at these staffing levels.

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We base this recommendation on multiple sources of evidence, including:

- In a well-known study of English hospitals, conducted before the improvement in staffing seen over the first decade of this century, hospitals with nurse-patient ratios less than 1:8 (in other words eight or more patients per nurse) experienced a 20 per cent or more increase in the odds of death in surgical patients (Rafferty et al 2007).
- Analysis of the RN4CAST data for the UK shows that this relationship holds for general medical and surgical wards after accounting for differences in other staff groups (Griffiths et al 2013). For example, hospitals with an average 1:8 ratio would expect to see approximately 2 per cent more deaths per year among surgical patients and 1 per cent for medical patients when compared to the best staffed 20 per cent of hospitals. This equates to approximately 20 deaths per year in an average hospital. Lower nurse-patient ratios are associated with more 'excess' deaths.
- International studies (Kane et al 2007) have demonstrated the effects of

Nightingale Foundation and the Patients Association

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