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RN4Cast: Planning for the future...

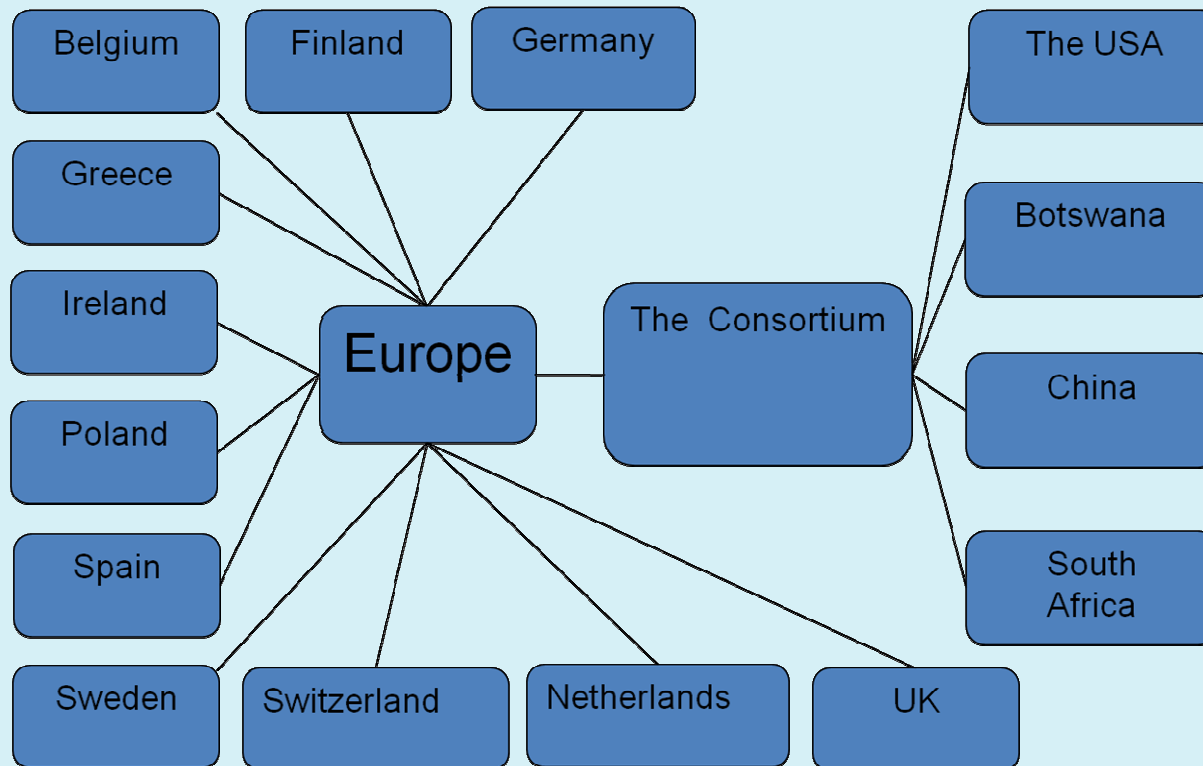
FUTURE OF NURSING WORKFORCE 4TH NATIONAL CONFERENCE: 9
FEBRUARY 2010

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National Nursing Research Unit



National Nursing
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RN4CAST-consortium



Key question

What are the nursing inputs needed to deliver safe and effective care?



An 'effectiveness' proposition

More registered nurses in acute care results in better quality care leading to:

- Fewer adverse events
- Better patient outcomes
- Better patient experience



Nurse staffing and patient safety: Recent meta-analysis

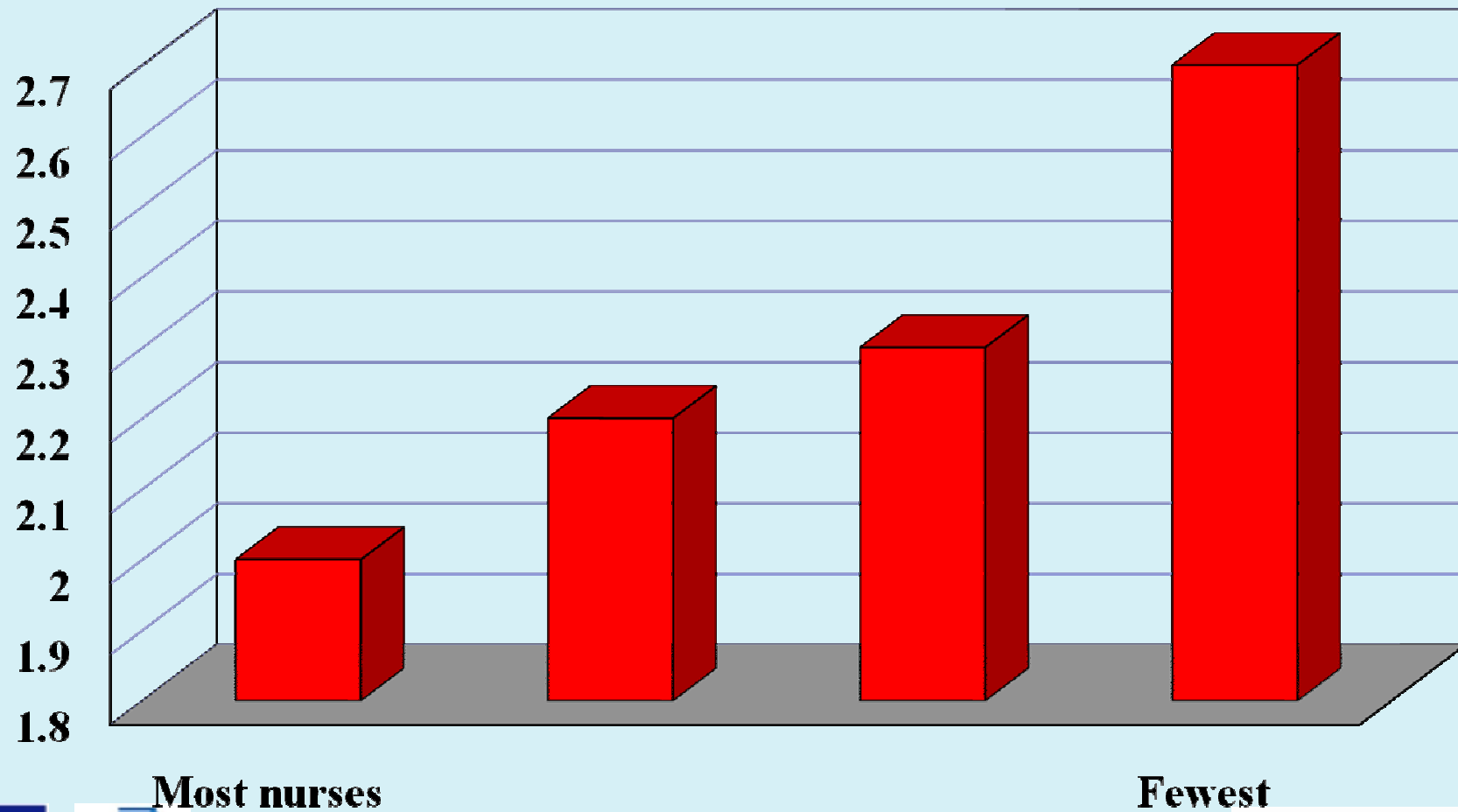
96 studies examining associations of nurse staffing levels and patients outcomes in hospital practice mainly from US and Canada, 1990-2006

- 96 studies
- Increased RN staffing was associated with lower hospital related mortality in:
 - ❑ intensive care units (OR 0.91 CI 0.86–0.96)
 - ❑ surgical units (OR, 0.84; 95% CI, 0.80–0.89),
 - ❑ medical patients (OR, 0.94; 95% CI, 0.94–0.95)
 - per additional full time equivalent nurse per patient day.

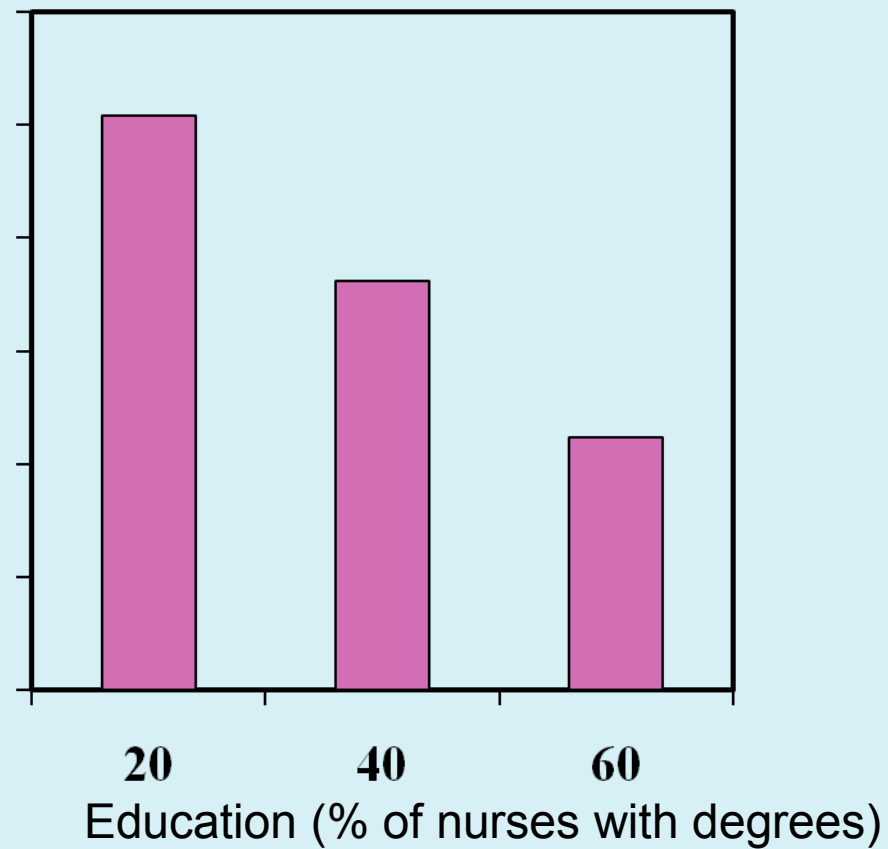
Kane R.L., Shamliyan T.A., Mueller C., et al. 2007. Nursing Staffing and Quality of Patient Care. *Medical Care* 45, 1195-1204.



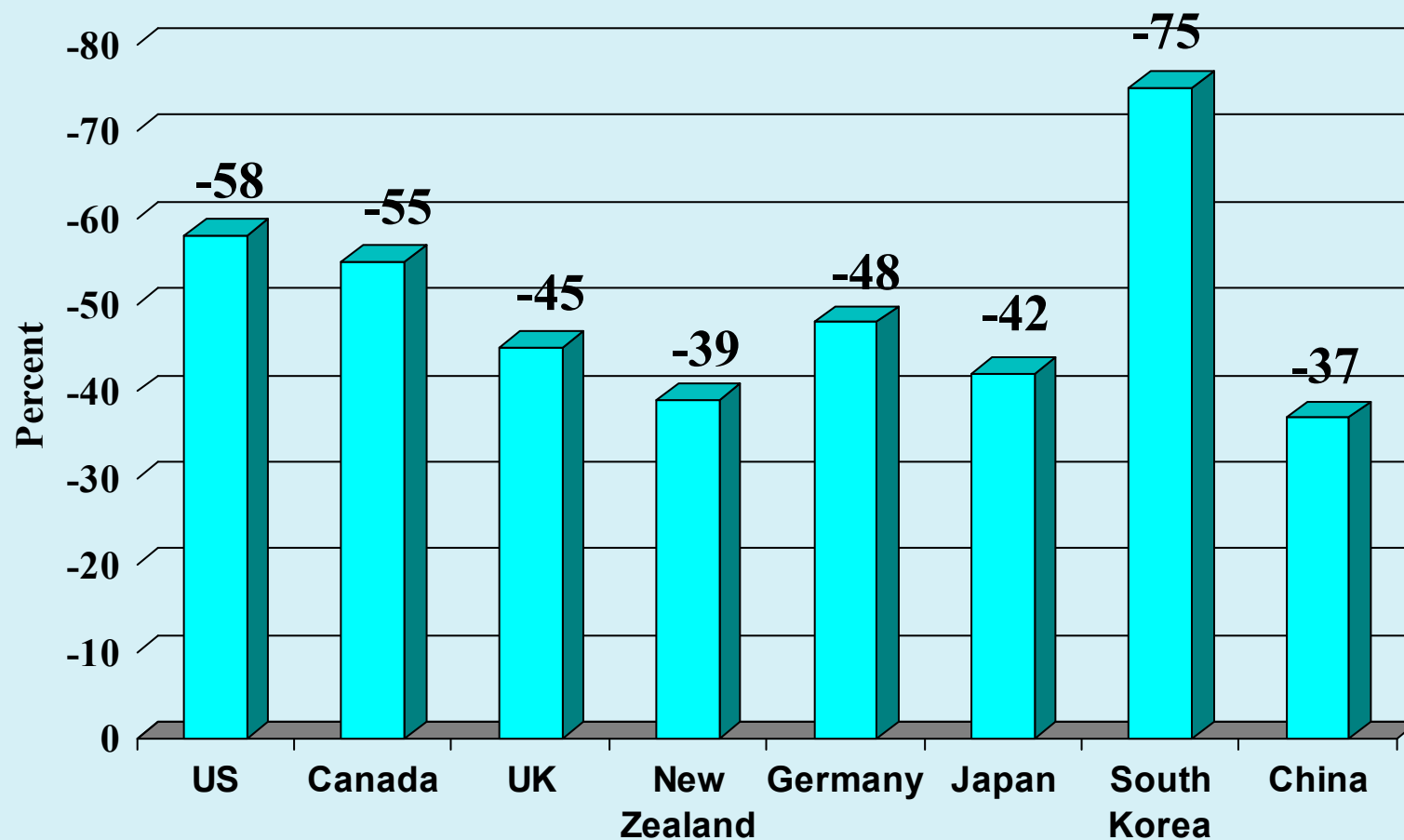
As the number of nurses goes down, the number of deaths goes up....



But as nurse education increases, mortality decreases...



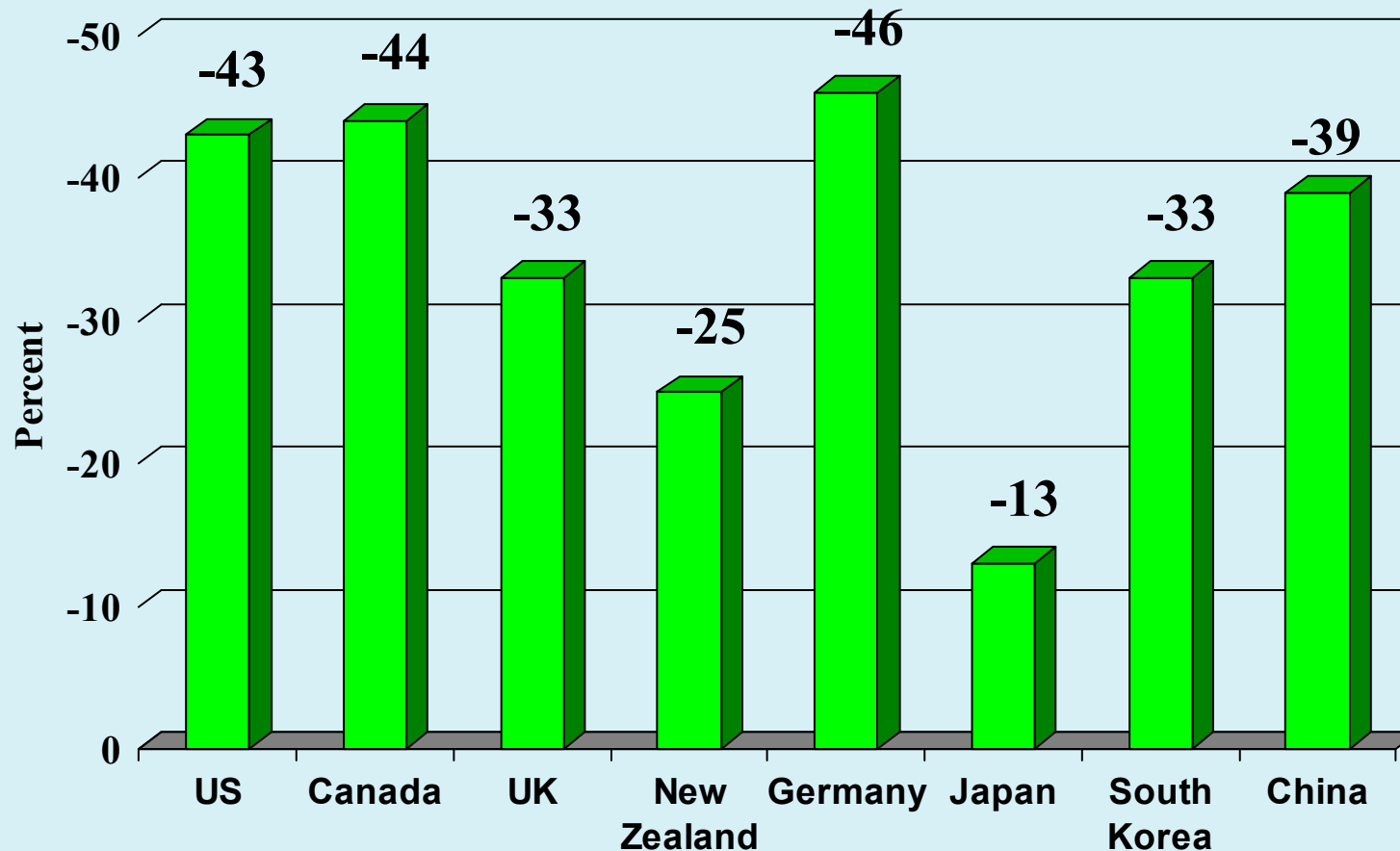
Decreases in Low Unit Quality in Better vs. Poor Hospital Working Environment



L. Aiken, Univ. of Pennsylvania

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Decreases in Nurse Burnout in Better vs. Poor Hospital Working Environment



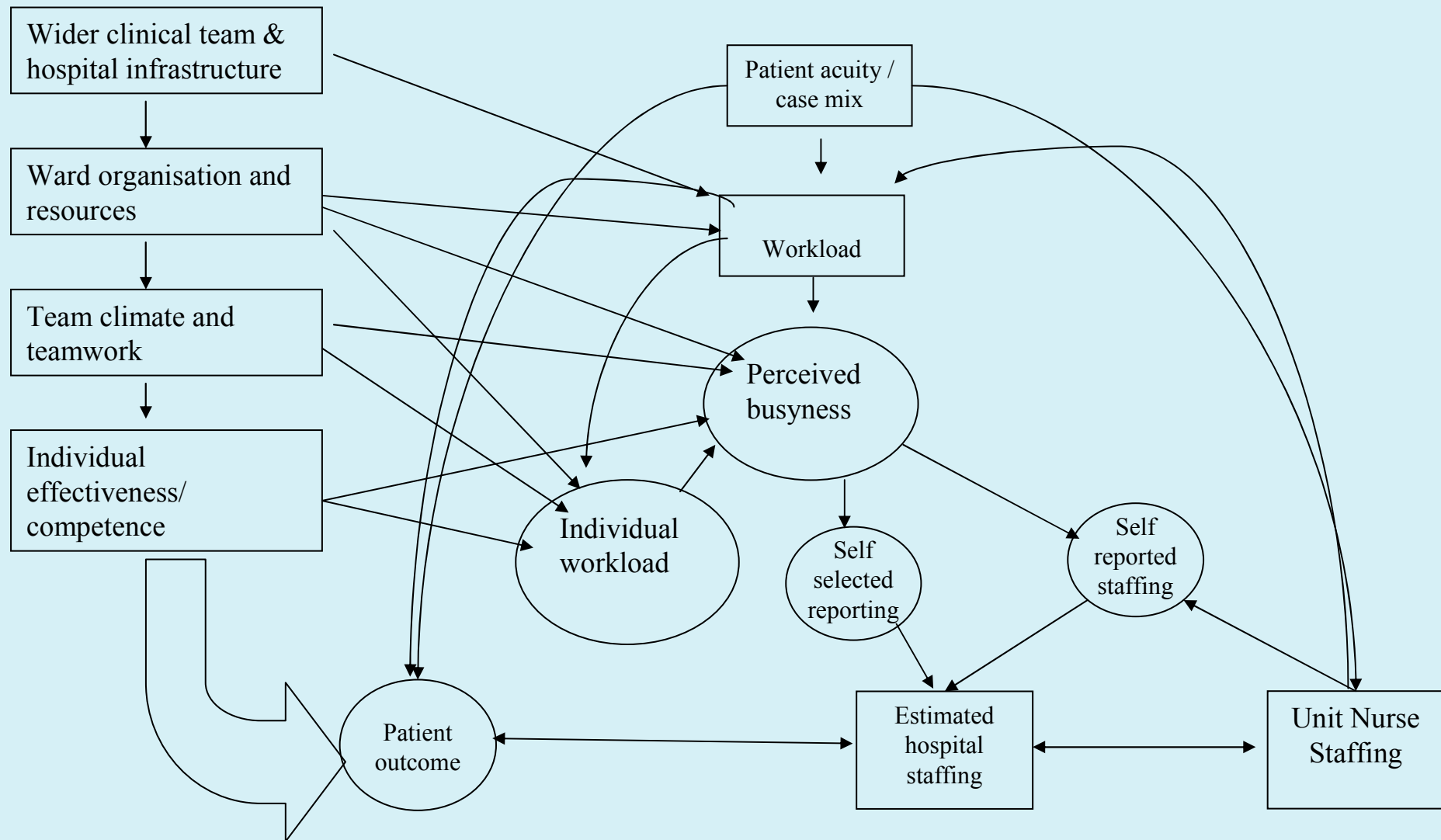
Nurse staffing, education, & work environment are important individually and together in determining hospital mortality

1. **Surgical patients in hospitals with better nurse work environments have 13% lower odds on dying;**
2. **Patients in hospitals with better staffing (two fewer patients per nurse) have 11% lower odds on dying;**
3. **Patients in hospitals with better educated nurses (20% more BSNs) have 8% lower odds on dying.**

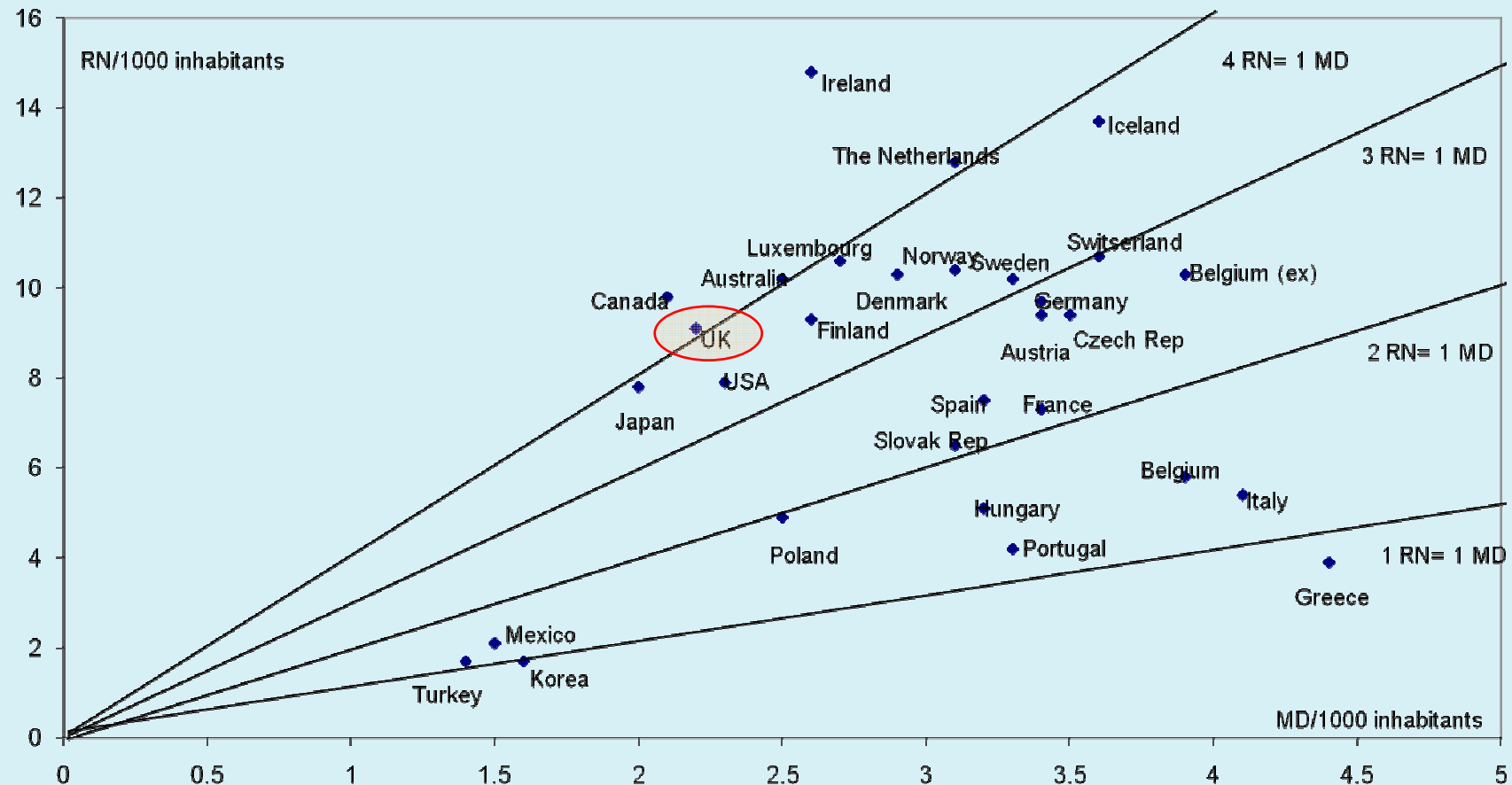
Surgical patients in hospitals that are better on all three have roughly 30% lower odds on dying.

Source: Aiken et al., JONA, 2008





Ratio nurses/physicians



Source: OESO 2005 – for Belgium (exact): J.Pacolet, 2006

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More than numbers?

Not just:

“How many nurses do we need?”

But:

“How do we use the resources that are available to deliver the best health care possible?”



Shortcomings current forecasting models

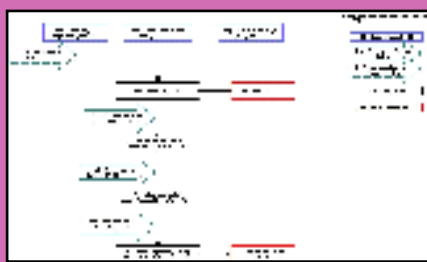
Despite the evidence, forecasting models for nurse workforce planning do not include:

- Impact of numbers & educational levels on quality & patient safety
- Impact nursing practice environment
 - Adequate staffing, support of management, relations between physicians & nurses, ...



EU FP7-FUNDED RESEARCH ON THE NURSING WORKFORCE

Traditional forecasting models



Patient safety

&

Nursing work environment

Nurse deployment

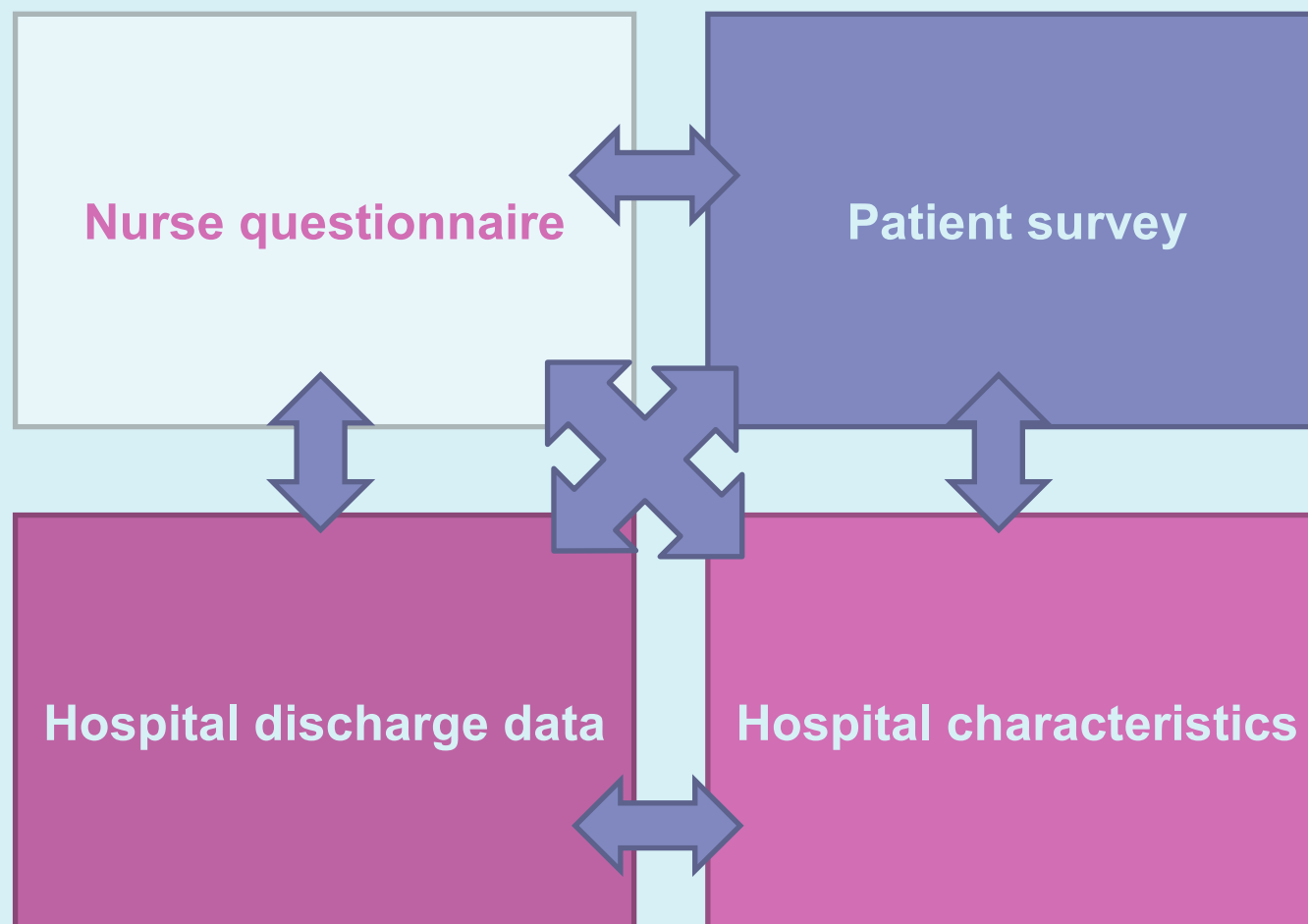
Other European and national research (e.g. prometheus(FP7))

- Image of nursing
- (ethical aspects of) migration
- Nursing education
- Competences, retention, recruitment, management

Accurate idea of the nursing workforce required (number & qualifications) for safe patient care and a healthy work environment for nurses



METHODOLOGY



Policy Implications

☐ Hospital administrators

- ☐ Better understand the implications of staffing decisions
- ☐ Better understand how organizational models affect care

☐ Governments

- ☐ Educational restructuring
- ☐ Increased pressure to improve quality of patient care

☐ Patients

- ☐ Improved outcomes
- ☐ Active, well-informed role in care-process

☐ Nurses

- ☐ Involvement in policy-making
- ☐ Recognition of contribution to patient care
- ☐ Improved nurse outcomes

