

The Effect of Health Policy Reform on Nurses and Patients in New Zealand

Mid Central DHB
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Background

New Zealand
Government
Policy Reform



Statistics

Population: 4,377,694 (as of 9/8/10)
Land mass: about the size of Colorado
Settled by humans: 1300's
Present populations: 86% *pakeha*, 14% *Maori*

Government

Queen Elizabeth II is the Head of State

Governor General appointed

Two major parties: Labour, National

Multi-member proportional representation system

Treaty of Waitangi (1840)

Health System

20 District Health Boards

Population-based funding for all services – inpatient, outpatient, mental health, primary care etc.

Health Policy Reforms

- Began in mid 1980's to help solve deficit
- Privatize “State Owned Enterprises” (transport etc.)
- Employment Contracts Act (1991) disempowered unions
- 1991: “Green and White Paper”: separate purchaser from provider responsibility; competition encouraged
- Hospitals to become “profit oriented” businesses
- Regional Health Authorities (N=4)
- Crown Health Enterprises (N=23)

Health Policy Reforms cont'd

- Annual competitive contracts for service provision
- “Managerialism”: remove all (nursing) disciplinary leadership from head nurse up; replace with “generic managers”
- Centralize budgets
- Substitution; casualization

Health Policy Reforms con'td

- 1996: “competition” rejected; change in rhetoric: “hospitals will be hospitals again”
- Deficit \$183 million 1996; **health policy reform did not save money**
- 2000: District Health Boards each received population-based funding with emphasis on improving outcomes and access (special emphasis on Maori)
- 2003: Health Professional Competency Assurance Act

Nursing health policy reforms

- 1993: training of Enrolled Nurses (EN – similar to LPN) ceases; EN's not “cost effective”
- All RN preparation moved to Universities or Polytechnics by 1994

Framework

“Re-engineering”

Link between nursing resources and patient outcomes

Prior research in NZ: McCloskey & Diers, 2004

Methods

Data sources: 1989-2006

Nurses: Nursing Workforce Data (N=208,760)

Patients: National Minimum Data Set
(N=>12 million)

All NZHIS-managed data; deidentified

Nursing data

Self-reported hours worked

Converted to nursing hours per 1000 patient days to control for decrease in LOS (7.0 to 5.3 days)

Patient Data

OPSN: Outcomes potentially sensitive to nursing
(Needleman/Buerhaus; McCloskey) N=11

Defined by ICD-9 diagnosis codes and DRGS

Outcomes Potentially Sensitive to Nursing (OPSN)

- Urinary Tract Infection
- Pressure Ulcers
- Hospital-acquired pneumonia
- Shock/cardiac arrest
- Upper gastrointestinal bleeding
- Hospital-acquired sepsis
- Deep venous thrombosis
- Central nervous system complications
- Wound infection
- Pulmonary failure
- Metabolic derangement (e.g.hypovolemia)
- Failure to rescue (death following any of the above)



All negative outcomes

OPSN (con't)

Inclusion and exclusion codes

Example: Wound infection ICD-9 958.3, 998.5

Exclude: same codes as principal diagnosis

Example: Pressure ulcers: ICD-9 682, 707.0

Exclude: primary diagnosis of hemi-, quadri-, or paraplegia; IV drug abuse

Data conversions and risk adjustment

Converted to ICD-10 and AN-DRGs for use with NZ data

Converted to rates per 1000 patient days (control for LOS)

Inclusion/exclusion criteria applied to both numerator and denominator (to capture patients truly at risk)

Statistical Strategy

Data are population based (whole population of hospitalized patients) thus:

No inferential statistics applied

“Expectations” rather than hypotheses

Expectations

1993 the pivotal year of policy change
pre 1993 – the “run up”;
1993-2000 – the chaos;
post 2000 – the recovery

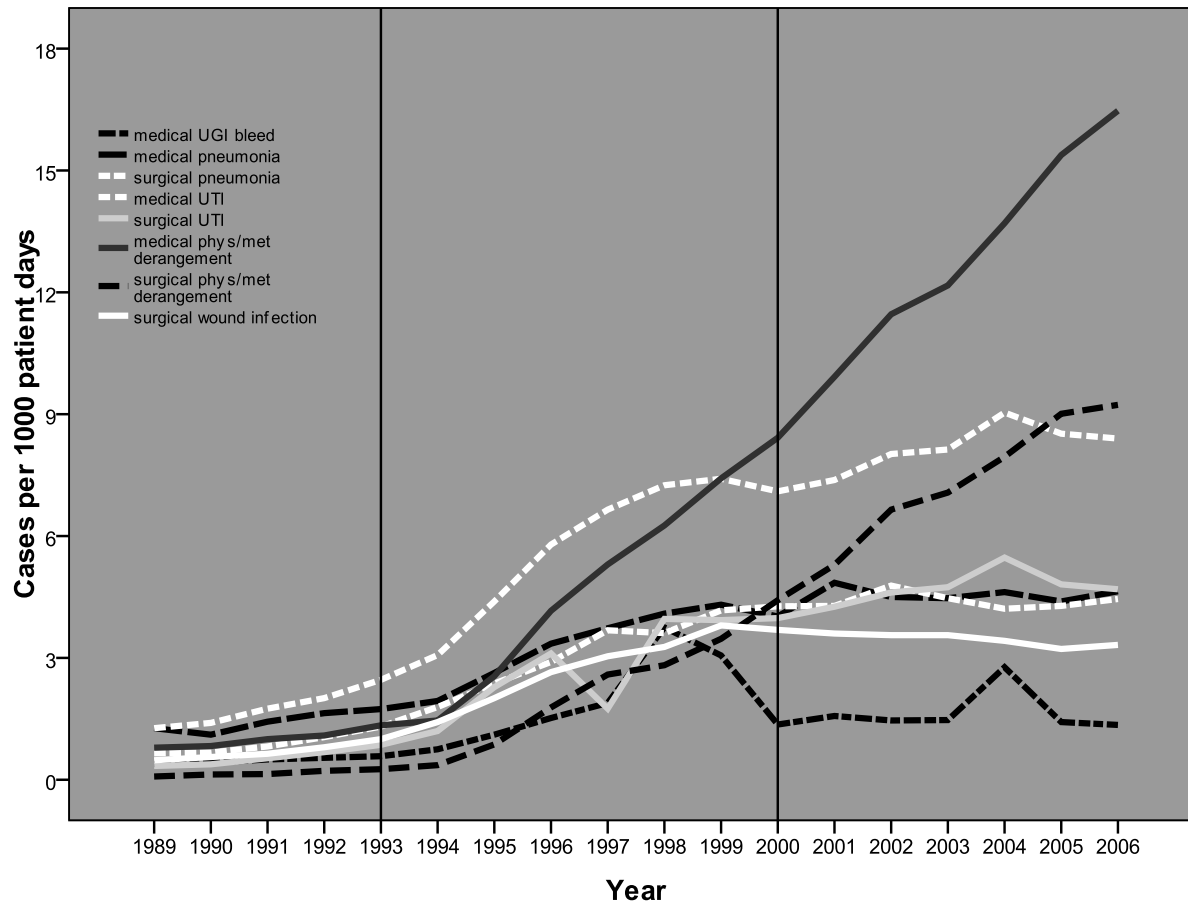
Thus: declining nursing resources with a nadir during the period of most chaos, slowly recovering.

Thus: adverse patient outcomes slowly rise until 1993, then rise more steeply until 2000, then level off

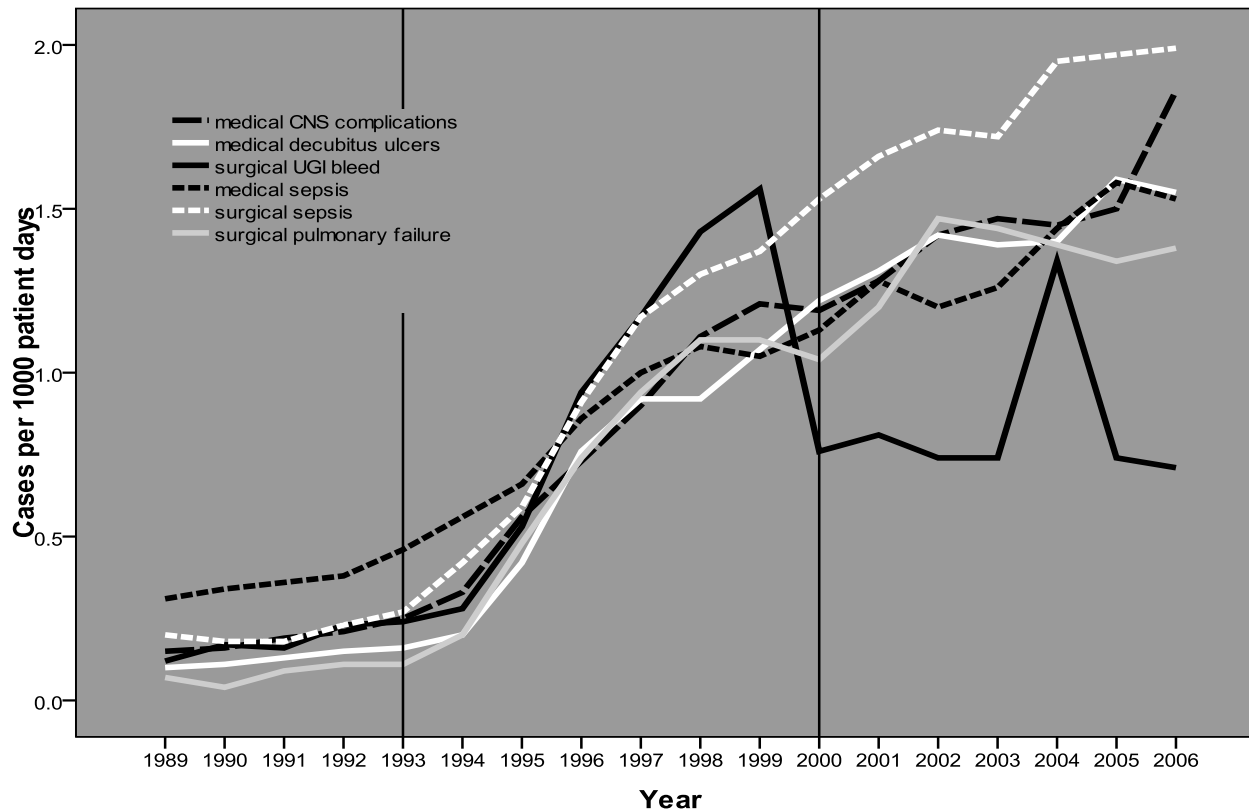
Results Nursing Hours



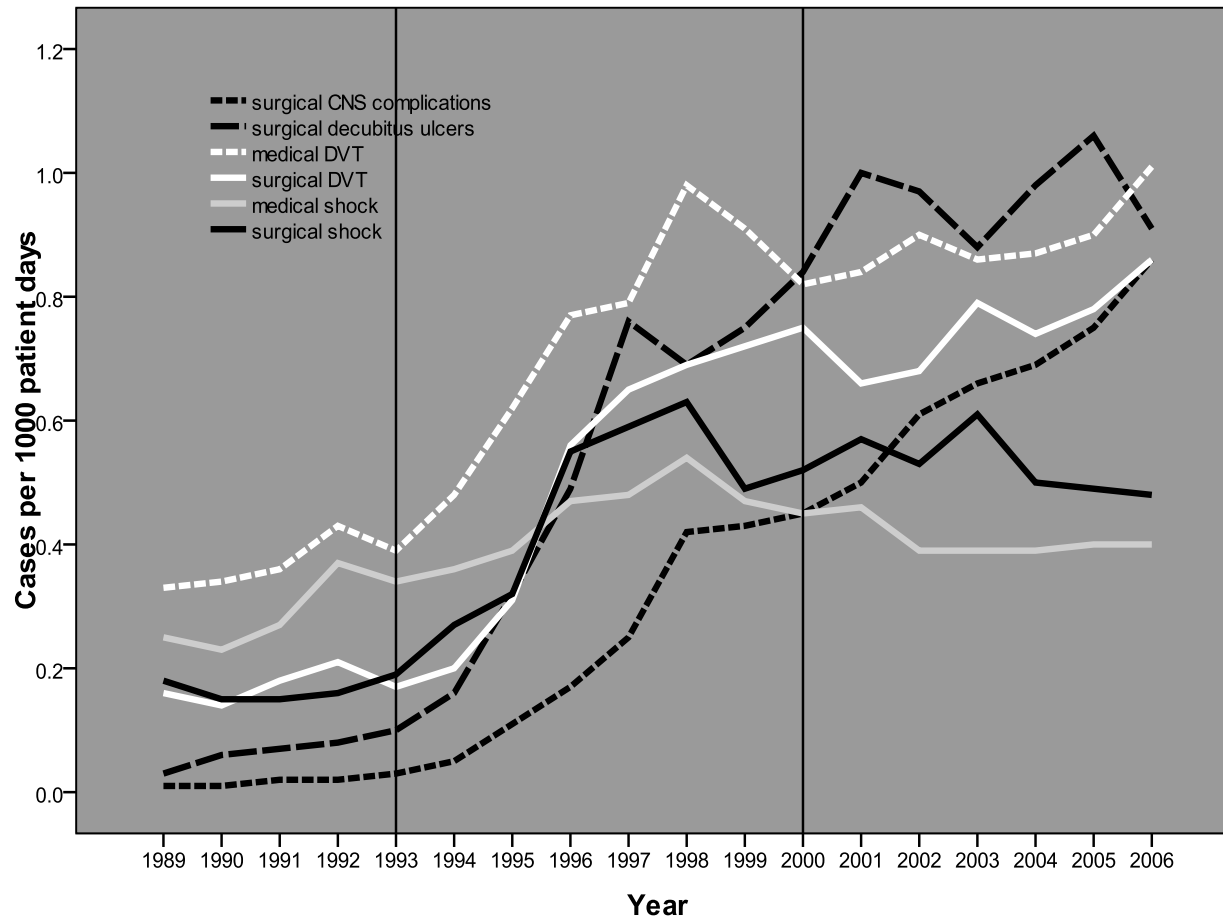
Results: High incidence outcomes



Results: medium incidence



Results: low incidence outcomes



“Expectations” met

“S” shaped pattern clearly evident in 16 of 20 potential outcomes

Partially evident in the other 4

Expectation met in 36 of 40 mean change comparisons

Limitations

Administrative data always limited by original documentation

Increased coding over the years

Hard copy data on nurses for the first several years – potential overestimates

Time series limited to 18 years

No original data on nursing during the changes

Discussion and Conclusions

NZ health policy reform had demonstrable and serious effects on nursing resources and on patient outcomes.

Recovery has not yet been completed.

Thank you for your attention.

