Needlestick Safety Legislation Has an Impact on Hospital Injury Rates

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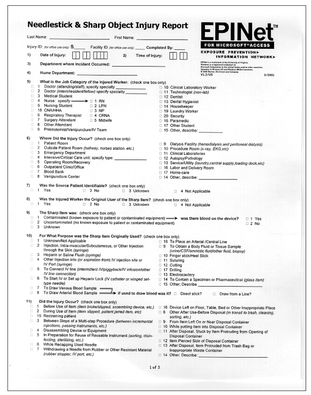
Introduction

Injury and infection from needlesticks are the most dangerous occupational health risk faced by hospital workers. The passage of HR5178, the Needlestick Prevention and Safety Act of 2000 (NSPA) reflected a landmark commitment to preventing these injuries. This study explores the impact of the NSPA on hospital workers' sharps injury experience.


Needlestick & Sharp Object Injury Report

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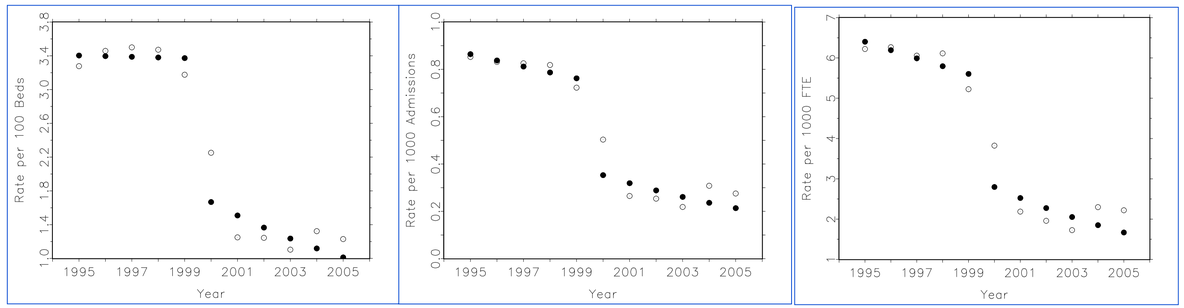
Methods

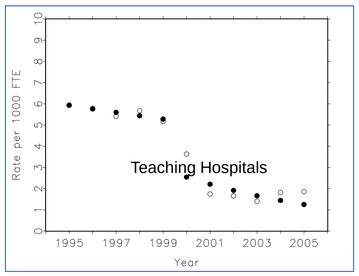
Design & Analysis: EPINet surveillance data on injuries from 85 hospitals over 10 years (1985-2005) combined with AHA data on hospital characteristics. Poisson regression models were used to estimate the changes in needlestick injury rates pre- and post- year 2000.

Findings

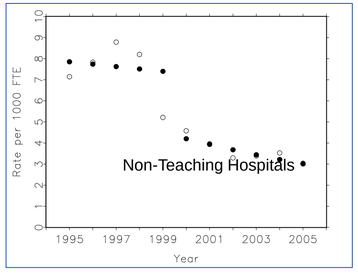


Observed rates (open circles), estimated rates from log-linear model (closed circels)

The difference between the pre-slope line and the post-slope line reflects a reduction of ~ 50% ($p<0.0001$). Regardless of which denominator is chosen, the pattern is markedly similar, with confidence intervals overlapping.



Injuries in teaching and non-teaching hospitals decreased ~45% ($p<0.0001$) but the difference between the groups was not significant. Staff in teaching hospitals experienced ~2 fewer injuries/1000FTE than in non-teaching.



Conclusions

Our findings support the independent and powerful effect of the NSPA in reducing hospital worker sharps injuries. The OSHA Bloodborne Pathogens Standard and availability of safety-engineered devices, which both predate the legislation, were not enough to prompt high adoption rates of safer devices.

Recommendations

- The most current bloodborne pathogen standards, as required in HR5178, must be enforced.
- Healthcare workers must work in cooperation with medical device industry to fill the gaps in safety-engineered device development.
- On-going training on safety devices is critical given the infusion of new devices and the turnover of staff.

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