Impact of Hospital Mandates on Health Care Personnel Influenza Vaccination Rates

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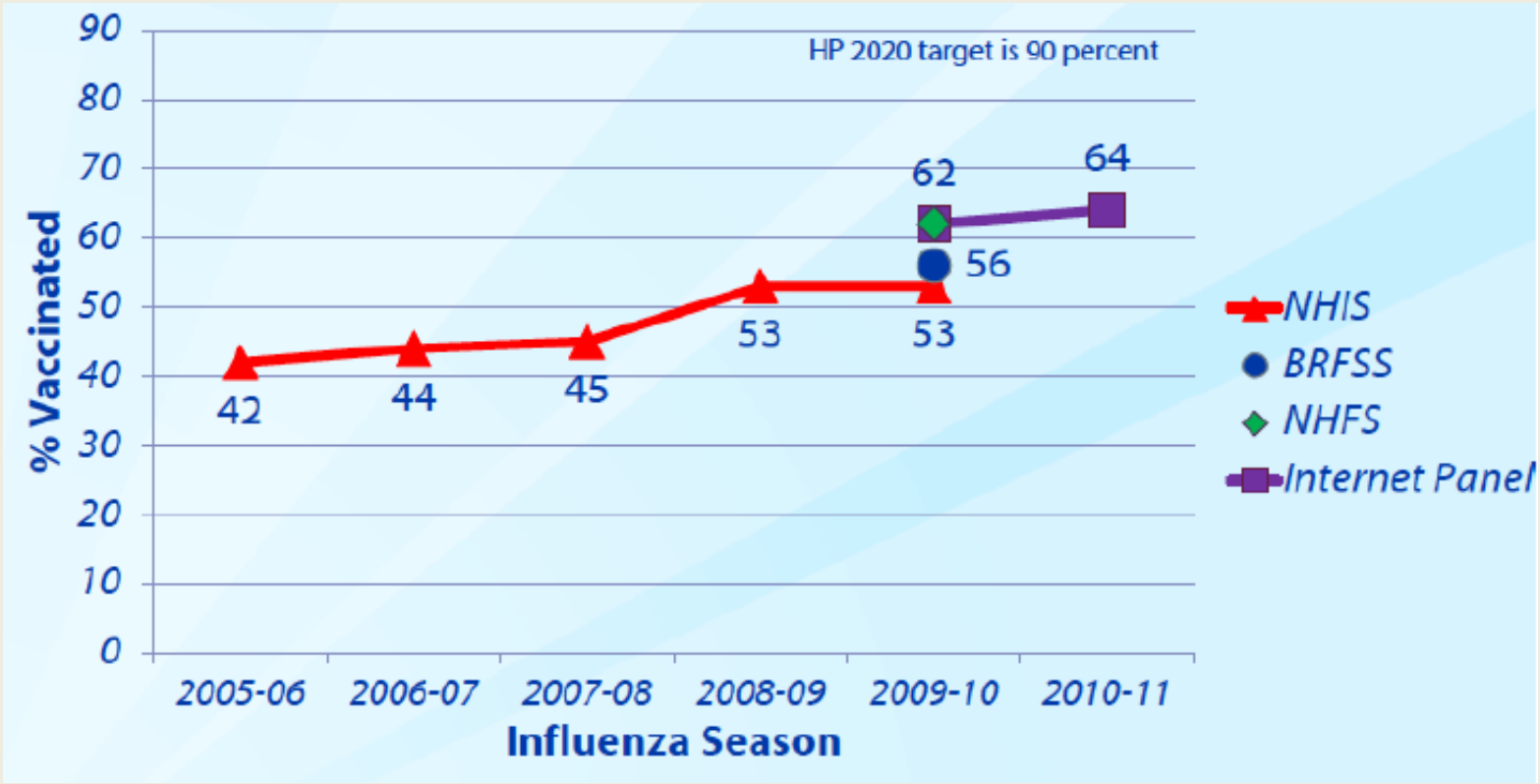
Background

- At health care facilities, vaccination of persons who can transmit influenza to high-risk persons is an effective measure for reducing the impact of influenza
- Vaccination of health care personnel (HCP) has been shown to decrease deaths among nursing home patients
- HCP vaccination rates are modest

Estimated HCP Influenza Vaccination Coverage 2005 - 2010



Research Questions

- Is there an association between hospital requirements for HCP influenza vaccination and their influenza vaccination rates?
- What factors are associated with implementation of institutional vaccination requirements ?

Methods

- Survey based on national CDC survey completed in early 2011
- 2009 American Hospital Association (AHA) Annual Survey Database
- Survey linked to AHA database for hospital characteristics

Hospitals Grouped According to Following Policy Definitions

- Vaccination mandate with termination or other consequence for noncompliance
- Vaccination mandate without consequences for noncompliance
- No mandate for HCP influenza vaccination

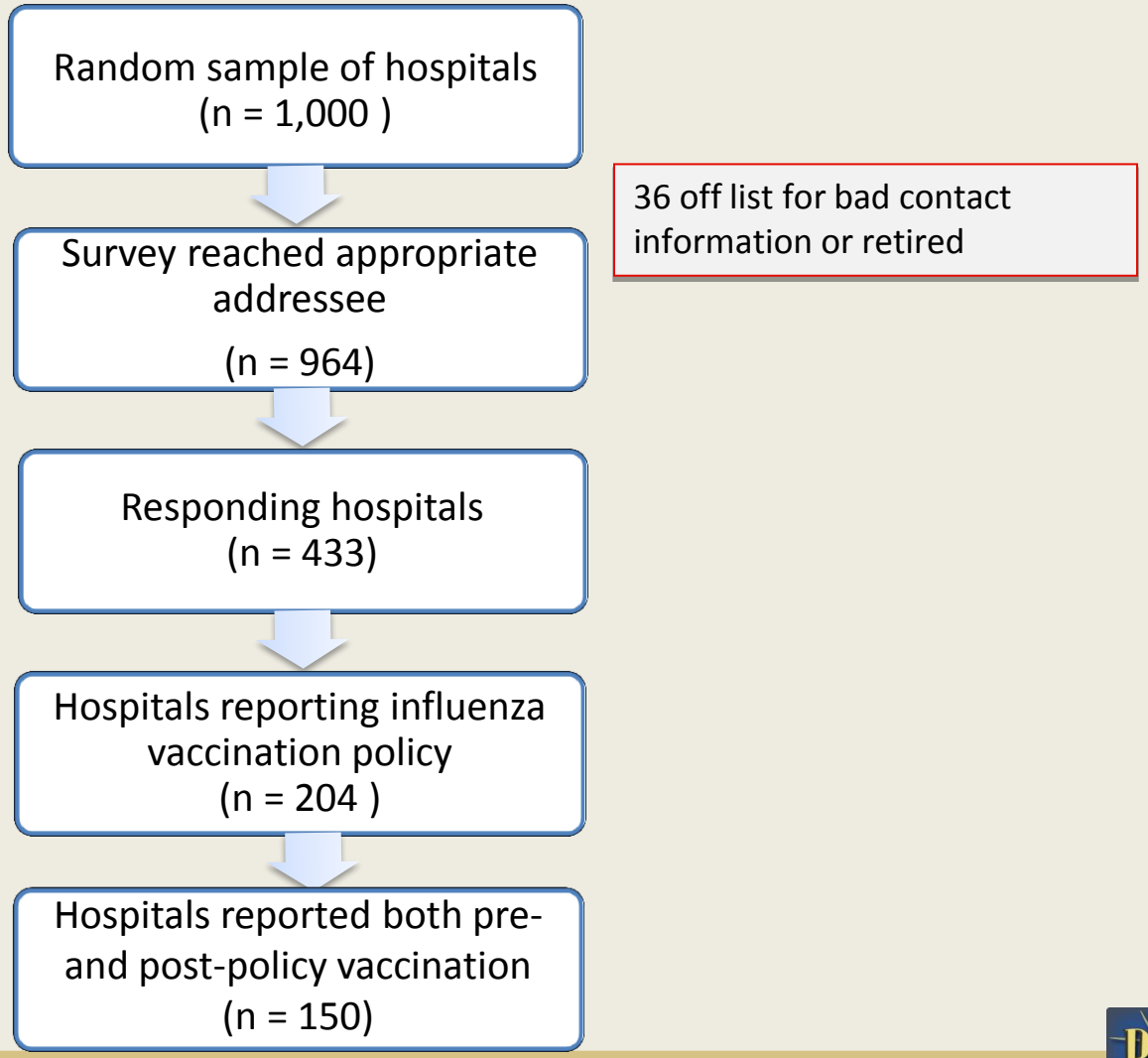
Statistical Methods

- Chi-square tests were used to compare whether hospital requirements for HCP influenza vaccination differed by:
  - Hospital characteristics (total hospital beds, region, ownership, admissions, inpatient days, Medicare discharges, full-time registered nurses, or full-time personnel)
  - Strategies used to promote HCP influenza vaccination
  - Personnel to whom the policy applied
  - Exemptions and consequences for non-vaccination
  - Inclusion of vaccination declination in requirements

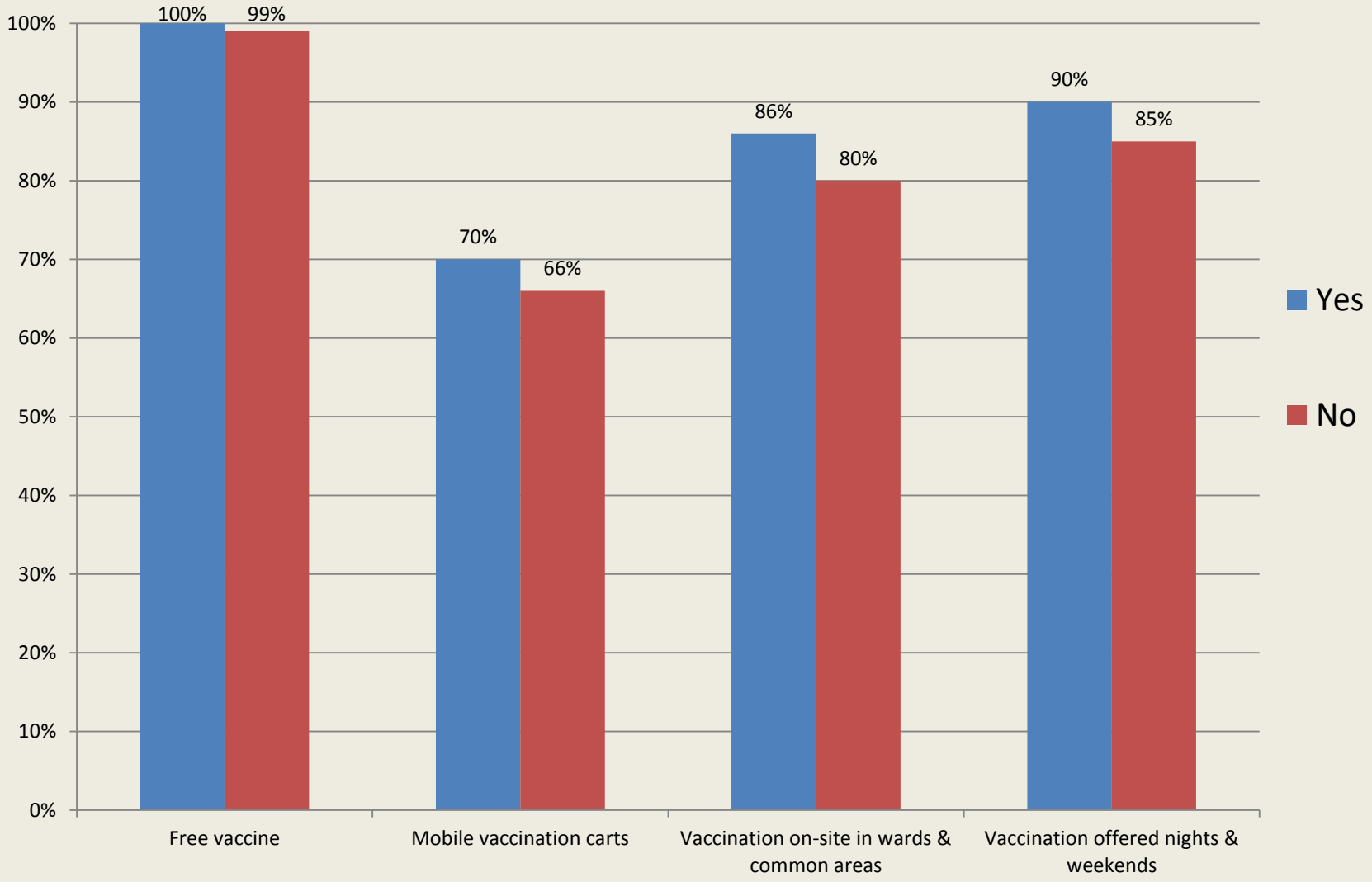
Statistical Methods

- One-way analysis of variance (ANOVA) was used to compare change in HCP influenza vaccination rates between pre- and post-implementation of HCP influenza vaccination policy.
- Statistical significance for all analyses was set at an $\alpha = 0.05$.
- SAS v9.3 and SPSS v18 were used for data management and statistical analysis.

Response Rate and Policy Prevalence



Comparison of Rates in Facilities with Mandated Vaccination +/- Consequences for Noncompliance



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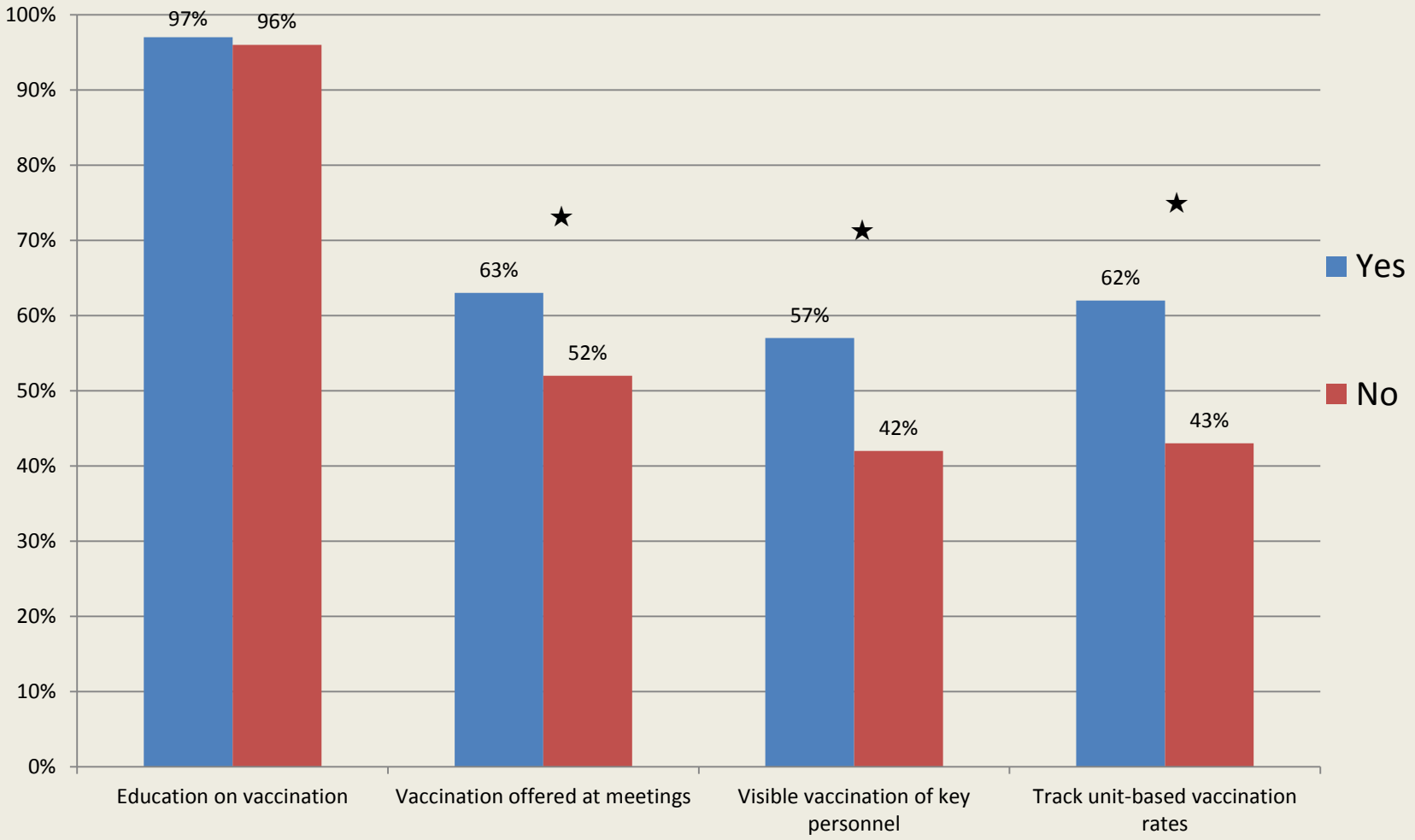

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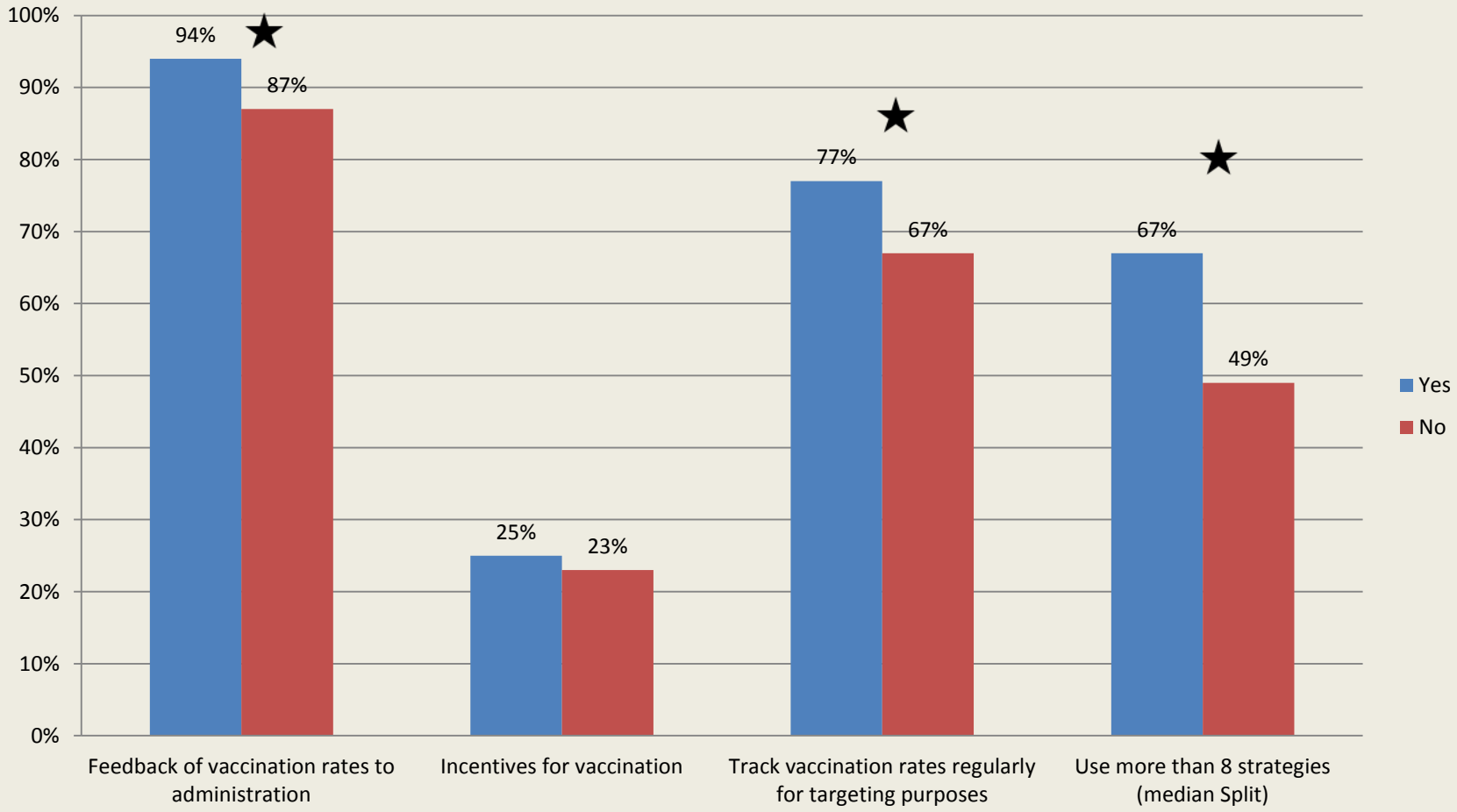
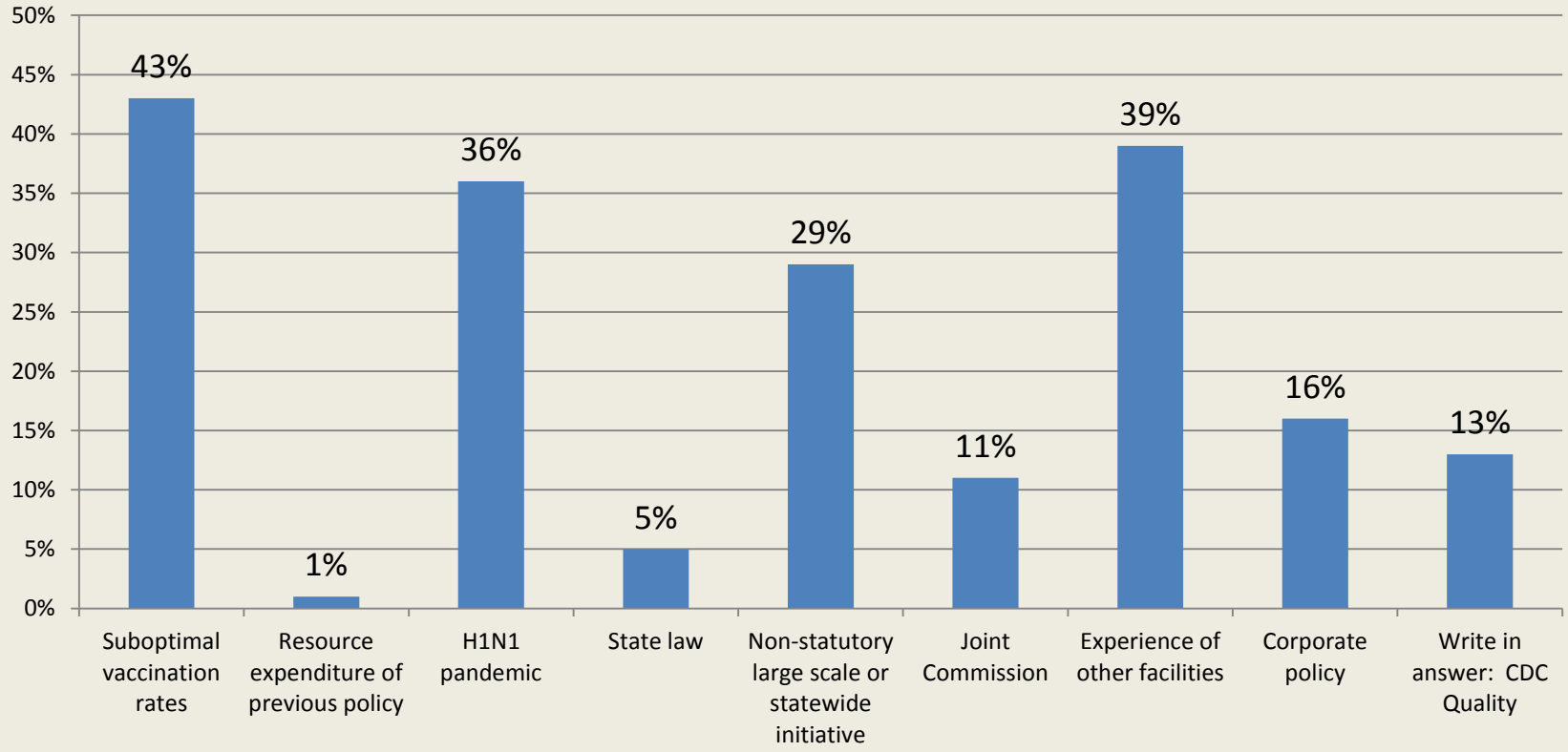
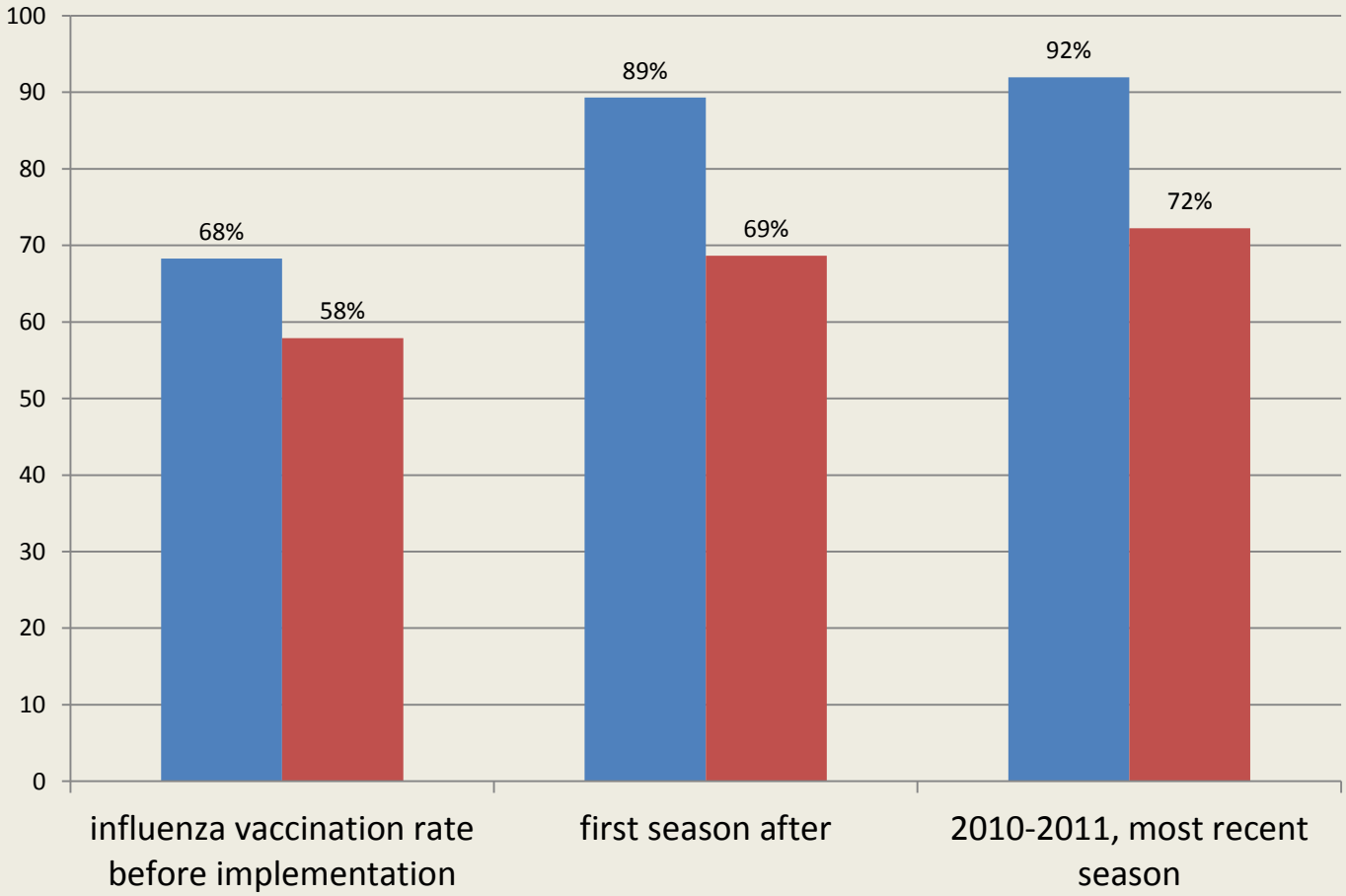


Issues leading institution to develop a mandate with consequence

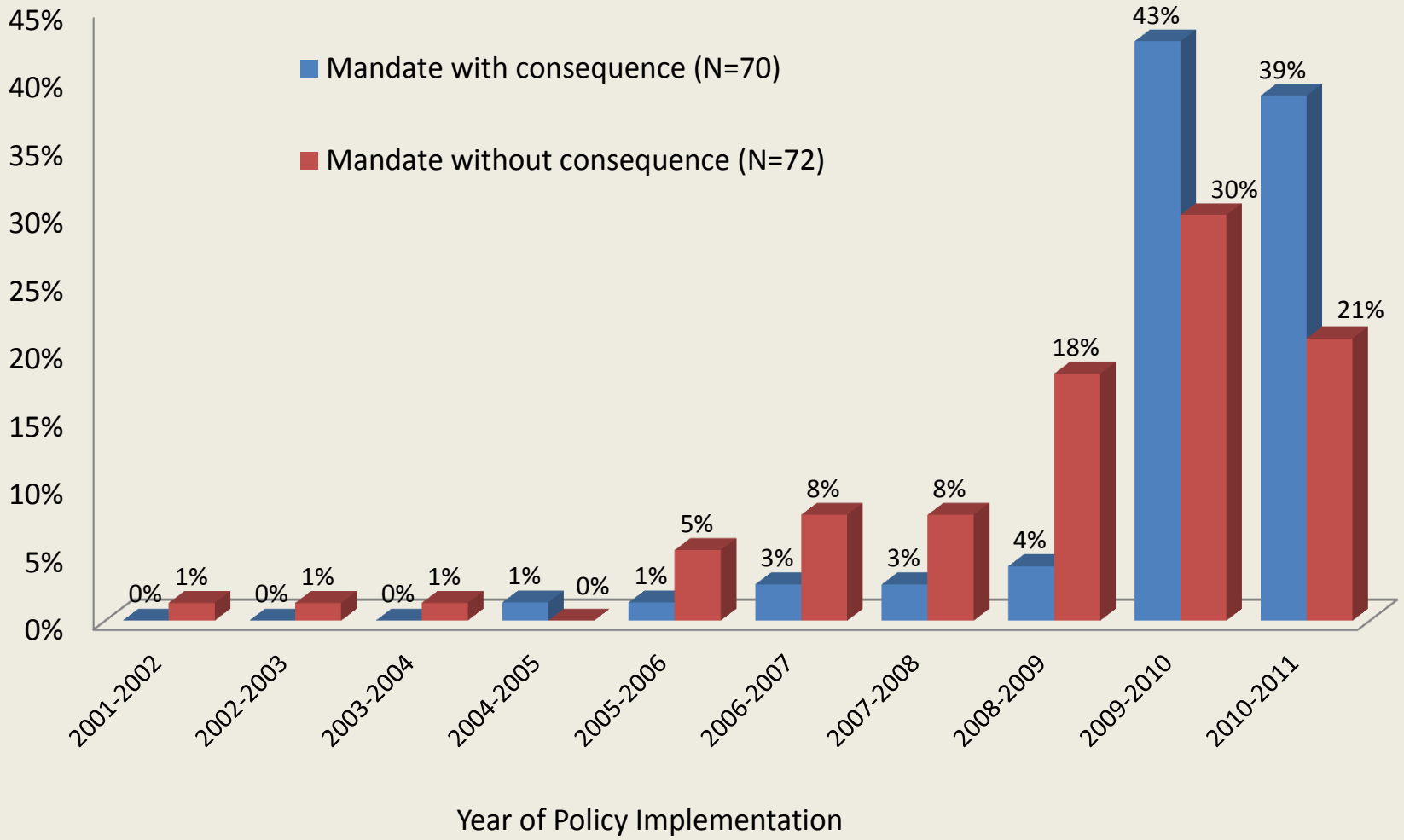


Reported vaccination rates



Those with noncompliance consequences increased vaccination rates 21.9% while those without noncompliance consequences increased 10.6% ($p<0.01$).

Percent Hospitals Implementing Influenza Vaccination Requirement Policy Over Time



Conclusions

- The prevalence of mandates is increasing
- Primary Drivers:
  - Suboptimal vaccination rates
  - H1N1 Pandemic
  - Joint Commission's recommendation
  - Experiences of other institutions
- Hospital vaccination mandates with consequences for noncompliance are associated with larger increases in HCP influenza vaccination rates than vaccination mandates without personal consequences