#432

Mandatory Employee Vaccination Policy with Termination for Non-Compliance Increases Vaccine Coverage in a Large, Not-for-Profit Health System

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ABSTRACT (updated)

Background: Vaccination of healthcare personnel (HCP) protects both the employee and vulnerable patients from vaccine-preventable diseases (VPD). Various implementation strategies have been tried. The positive effect of mandatory influenza vaccination of HCP has been described. However, the effect of mandatory employee vaccination policies on vaccines other than seasonal influenza is not well studied.
Methods: Intermountain Healthcare is a large, not-for-profit health system based in Salt Lake City, Utah, which includes 22 hospitals and over 32,000 employees. Due to suboptimal HCP vaccination rates, Intermountain implemented a new policy for all employees beginning on January 1, 2010 that required either update of vaccination status or signing a waiver. Required vaccinations included seasonal influenza, MMR, Tdap, varicella, and Hepatitis B. Despite high compliance with the policy, actual vaccination rates remained below goal. In response, a system-wide mandatory policy of immunization or documentation of immunity (using ACIP recommendations) was implemented on August 1, 2011. Medical and religious exemptions were allowed, but required approval. Non-compliance resulted in termination of employment. We retrospectively reviewed employee vaccination rates from 2007-2011. We developed Poisson-regression models to assess for a change in immunization rates across the study periods.
Results: In 2011, 32,092 of 32,483 (99%) received influenza vaccination, increased from 75-86% in prior years (p<0.01). Compliance rates for other VPDs are shown in the figure. Only 283 (<1%) employees received exemptions: 228/280 (81%) medical exemptions and 74/95 (78%) religious exemptions were granted. Sixteen employees were terminated due to noncompliance, and 23 retired or voluntarily left.
Conclusion: A mandatory employee vaccination or documented immunity policy with termination for noncompliance successfully increased coverage rates within a large, not-for-profit healthcare system spanning a large geographic area when aggressive voluntary measures failed. Seasonal influenza vaccination rates increased to 99%, and vaccination rates of other required vaccines increased as well. Employee termination was rare.

BACKGROUND

- Vaccination of healthcare personnel (HCP) protects both the employee and vulnerable patients from vaccine-preventable diseases (VPD).
- Various implementation strategies have been tried nationally
- The positive effect of mandatory influenza vaccination of HCP has been described.
- The effect of mandatory employee vaccination policies on vaccines other than seasonal influenza is not well studied

OBJECTIVES

- To describe the effects a mandatory employee vaccination policy with termination for non-compliance on employee vaccine coverage.

METHODS

- Intermountain Healthcare (IH) is a large, not-for-profit health system based in Salt Lake City, Utah
  - 22 hospitals and more than 185 physician clinics in 2 states
  - > 32,000 employees
- Due to low rates of documentation of HCP vaccination or immunity, IH implemented a policy on January 1, 2010
  - Required either update of vaccination status or signing a waiver
  - Required vaccinations included: seasonal influenza, MMR, Tdap, Varicella, and Hepatitis B vaccines
- Despite high compliance with the policy, actual vaccination rates remained below goal
- On August 1, 2011, a system-wide mandatory policy requiring immunization or documentation of immunity (using the 2011 ACIP guidelines) was implemented
  - Reviewed and approved by administration, legal counsel, Employee Health, and Infection Control Guidance Council
  - Medical and religious exemptions were allowed, but required approval
    - Medical exemptions required approval by a panel of physician experts and used the contraindications and precautions for each vaccine as outlined by the 2011 ACIP guidelines
    - Religious exemptions required a detailed statement of a specific religious tenet in opposition to receiving vaccination
  - Non-compliance resulted in either termination of employment, retirement, or voluntary termination
- We reviewed employee vaccination rates from 2007-2011. We developed Poisson regression models to detect if increase in immunization rates across the study periods was significant.

RESULTS

- In 2011: 32,092 of 32,483 (99%) received influenza vaccination, increased from 75-86% in prior years (p<0.01).
- Rates for other vaccines increased (table)
- Only 302 (<1%) employees received exemptions
  - 228/280 (81%) of medical exemptions requested were granted
  - 74/95 (78%) of religious exemptions requested were granted
- 16 (0.05%) employees were terminated for non-compliance
- 23 (0.07%) employees retired or left voluntarily

RESULTS

Employee Vaccination/Immunity Rates for 2007-2011

	2007-2009	2010	2011	P value
Seasonal influenza	***75%***	***86%***	***99%****	***<0.001***
Measles	72%	98%	98%	<0.001
Mumps	51%	92%	93%	<0.001
Rubella	76%	98%	98%	<0.001
Tdap	***43%***	***85%***	***87%****	***<0.001***
Varicella	70%	99.7%	99.6%	<0.001

****p < 0.05 comparing 2010 to 2011***

SUMMARY/CONCLUSIONS

- A policy of mandatory employee vaccination or documented immunity with termination for noncompliance successfully increased coverage rates within a large, not-for-profit healthcare system when aggressive voluntary measures failed.
  - Seasonal influenza vaccination rates increased to 99%
  - Tdap vaccination increased as well
- Medical or religious exemptions were rare (<1%)
- Employee termination was an extremely rare event
- Vaccination of healthcare personnel (HCP) protects both the employee and vulnerable patients from vaccine preventable diseases (VPD)

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