

Influenza Vaccination Attitudes and Beliefs Among US Working Adults Attending Employer-Based Vaccination Clinics

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Background

- Influenza illness affects all age groups. Among working adults, influenza is estimated to account for more than 17,000 lost days of productivity annually.¹
- More than one-half of the 182.4 million U.S. adults aged 20–64 years are employed,² making working adults the largest group affected by influenza.³
- The workplace is the most frequent site for adult influenza vaccination other than the physician’s office.⁴
- Two vaccines are approved for adults in the United States.
 - Trivalent inactivated influenza vaccine (TIV) for eligible adults ≥18 years of age
 - Live attenuated influenza vaccine (LAIV) for eligible adults aged 18–49 years

Objective

- To assess attitudes and behaviors about influenza vaccination among adults attending on-site, employer-sponsored vaccination clinics

Methods

- A randomized cluster-controlled trial was conducted during the 2008–2009 influenza season at a convenience sample of 53 geographically-diverse U.S. employers with on-site, employer-sponsored influenza vaccine clinics.
- Employer inclusion criteria were ≥60 employees, non-healthcare business, previous no-cost influenza clinics, and limited previous LAIV use.
- Employer sites were randomized to one of three arms (**Table 1**):
 - Control sites advertised and offered TIV.
 - Choice sites offered LAIV or TIV, maintained their previous advertising level but noted the choice of vaccines.
 - Choice Plus sites increased advertising, offered a choice of LAIV or TIV, and provided a nominal incentive.

- All eligible employees desiring vaccination in the Choice and Choice Plus arms were equally offered commercially available TIV or LAIV according to standard vaccine clinic protocols.
- Vaccine recipients in all study arms were asked to complete a survey regarding their influenza vaccine choice immediately after vaccination.
- Responses were analyzed using descriptive statistics.

Table 1. Intervention Description by Intervention Arm

Study Procedure	Intervention Arm		
	Control	Choice	Choice Plus
No cost influenza vaccine clinic	Yes	Yes	Yes
Advertising:			
Level	Same as previous year	Same as previous year	Increased from previous year
Promoted choice of vaccines	No	Yes	Yes
Promoted incentive for vaccination	No	No	Yes
Vaccine offered by clinic nurse	TIV only*	TIV and LAIV†	TIV and LAIV†
Vaccinated employees given \$5 gift card	No	No	Yes‡

LAIV=live attenuated influenza vaccine; TIV=trivalent inactivated influenza vaccine.
*LAIV was available if specifically requested by an eligible employee.
†LAIV was only offered to eligible employees 18–49 years of age. LAIV is not approved for adults ≥50 years of age.
‡Incentive given for either type of vaccine.

Results

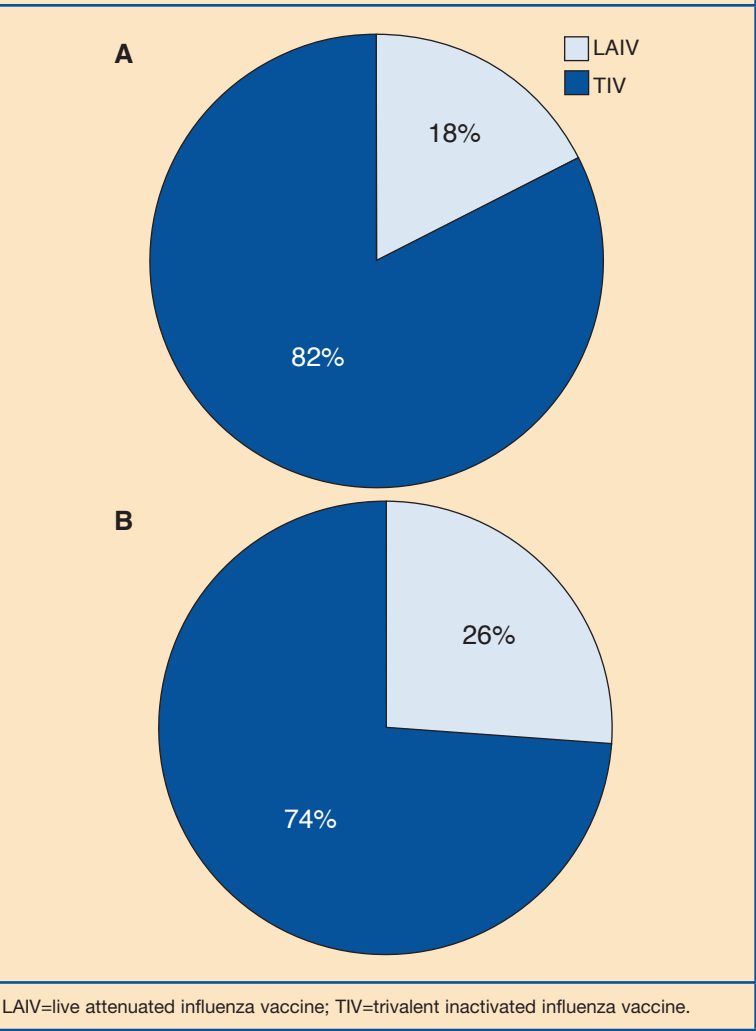
- Employer characteristics were similar in each study arm.
- Surveys were collected from 4274 of 5013 vaccine recipients (85%).
- 92% of respondents were full-time employees, 53% were female, and 66% were aged 18–49 years (**Table 2**).

Table 2. Description of Vaccinated Employees (N=4274)

Characteristic	
Age, y	
18–49	2805 (65.6)
50+	1469 (34.4)
Male	2013 (47.2)
Race, n (%)	
White	3167 (74.8)
Black	438 (10.3)
Asian	372 (8.8)
Other	257 (6.0)
Ethnicity, n (%)	
Not Hispanic or Latino	3546 (92.2)
Hispanic or Latino	298 (7.8)
Occupation, n (%)	
Executive or professional	1583 (38.4)
Clerical and administration	951 (23.1)
Technical	616 (14.9)
Operator or laborer	389 (9.4)
Sales	274 (6.6)
Services	166 (4.0)
Precision production and craft work	142 (3.4)
Education, n (%)	
College graduate	2232 (52.4)
Some college or technical school	1223 (28.7)
High school graduate	696 (16.3)
Some high school	108 (2.5)

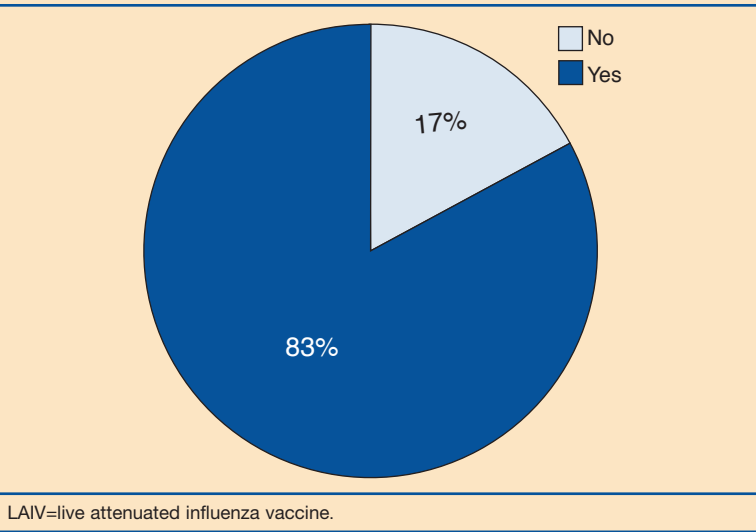
- 76% of respondents had been vaccinated during the previous influenza season.
 - 87% of whom were vaccinated at work; 99.4% of whom had received TIV.
- 99% of respondents anticipated receiving an influenza vaccine during the next influenza season.
- 18% and 26% of eligible employees in the Choice and Choice Plus arms, respectively, chose LAIV instead of TIV (**Figure 1**).

Figure 1. A. Vaccine Chosen in “Choice” Study Arm
B. Vaccine Chosen in “Choice Plus” Study Arm



- Only 5% of employees stated that they had a medical condition that made them ineligible for LAIV.
- 17% and 16% strongly agreed that they did not like needles or nasal sprays, respectively.
- Overall, 17% stated they would not have been vaccinated if only TIV had been offered (**Figure 2**).

Figure 2. Would You Have Been Vaccinated If LAIV Were Not Offered?



Conclusions

- The majority of individuals attending employer-based influenza clinics are adults 18–49 years of age without chronic medical conditions.
- Despite little previous experience with the vaccine, 18%–26% of eligible employees chose LAIV, many of whom stated that they would not have been vaccinated otherwise.
- Providing LAIV as a vaccine option at workplace vaccination clinics may increase vaccination coverage in individuals who may otherwise refuse vaccination.

References

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Sponsored by MedImmune, LLC.