Electronic Solutions to Enhance Tracking and Feedback of Compliance with Mandatory Influenza Vaccination for All Hospital Staff

Poster #399

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Background

- The increasing adoption of mandatory influenza vaccination (MIV) policies raises a need for IT solutions to assist implementation and ensure compliance.
- Enforcement of MIV campaigns requires many support systems
  - Identification of eligible individuals across multiple job titles and often across different tracking systems (e.g. students, trainees, vendors, employees, contractors, temp/registry staff)
  - Compliance-tracking system
  - Notification system, to alert non-compliant individuals and their supervisors
- In 2009, we adopted a "safe campus" MIV policy which applied to all employees working on medical center grounds or having patient contact, including physicians, nurses, ancillary clinical staff, clinical trainees, students, vendors, temporary workers, and volunteers. The policy requires vaccination or written declination plus masking for the duration of flu season.

Methods

An electronic MIV database was built to track compliance

- Human resources (HR) databases for Medical Center and School of Medicine personnel were interfaced with the MIV database for real-time staff data
- Department, director, manager, cost center, job code/type, physical location, employment status (active vs leave of absence) and hire date are updated daily
- University student data from secured Information Services login accounts were interfaced with the MIV
- Lists of non-university students, temporary workers, and volunteers are manually uploaded each year.
- Vaccination status (vaccination information, signed declination/will mask, non-participant) is recorded through point-of-service access to the MIV (via security restricted desktops or iPads on mobile carts).

To improve participation and accountability, an internal portal was created that facilitates access to progress reports

- Individuals could access their own vaccine status
- Supervisors or Division/Dept administrators could access detailed reports of campaign status for all supervised staff or Division/Dept employees
- Summary reports show campaign vaccination and participation progress
- Portal tools allow "print your own" vaccination confirmation and "submit my electronic declination"
- Portal displays updated information on campaign events, information sheets, and compliance guidelines

Beginning in 2011, an integrated alert system provided periodic auto-generated emails from HR to individuals who had yet to participate

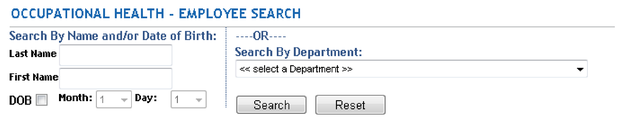
- Supervisors received automated alerts line-listing non-participants and providing instructions for exclusion from duty if staff failed to participate by the deadline.

Results

Our electronic system for MIV participation enabled

- Real-time tracking
- Weekly automated-reminders
- Immediately accessible reports of compliance by unit, supervisor, or employee
- Increased vaccination from 58% → 86% in the first MIV year, and improved vaccination from 86% to 96% following enhanced portal access and automated notifications
- Decreased Occupational Health (OH) workload
  - MIV initially relied upon OH and HR to track, page, and email non-participants. Enhancements allowed this to be fully automated by year 3
  - In Year 1 of MIV, OH hosted 50 poorly-attended vaccine events and spent a full FTE of effort urging non-participants to comply. After portal access to tracking reports and the integrated alert system, responsibility of compliance was transferred to supervisors and individuals.
  - OH resources have been re-directed to support:
    - Unlimited walk-in vaccinations for staff
    - Roaming carts/Unit based peer-peer vaccination
    - By appointment group events (Grand Rounds, Dept meetings, etc.)
    - Three well-attended large vaccine events

Portal Access



2012-2013 Unit/Department Detail Report

Must Wear Mask: If this is Yes, staff has not participated or declined
Participation: If this is blank, staff has not participated

DH 56: Unit/Department Name - (Manager/Director Name)

Total Staff: 10 Percent Vaccination Completed: 80.00% Percent Participation: 90.00%

Name	Cost Center	Must Wear Mask	Participation
Staff Name	DH 56: Unit (346086 cost center)	No	Participated
Staff Name	DH 56: Unit (346086 cost center)	Yes	Participated
Staff Name	DH 56: Unit (346086 cost center)	No	Participated
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Staff Name	DH 56: Unit (346086 cost center)	No	Participated
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Automated Compliance Notification

As of today's date, you have not complied with UC Irvine Health's flu vaccination policy. You must participate by obtaining a flu vaccination or completing the declination form and wear a mask.

If you feel you have already participated by receiving the flu vaccination recently please note it takes approximately 48 hours to input your participation. If you have any questions please contact Occupational Health at XXX-XXX-XXXX.

As a reminder, failure to participate by 4pm PST December X, 20XX will result in disciplinary action on December X, 20XX unless there are extenuating circumstances. We are committed to ensuring a safe environment for our staff and patients this flu season.

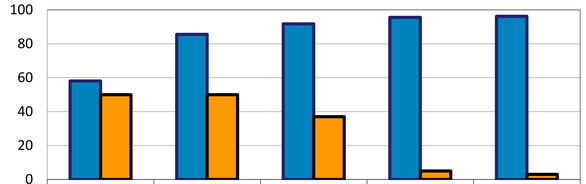
For more information on our flu vaccination policy, visit https://intranet.ha.uci.edu/sites/occhealth/fluvacc/default.aspx

Please do not respond to this e-mail as it is not an active e-mail account and you will not receive a response in return.

Campaign Progress Report on Portal

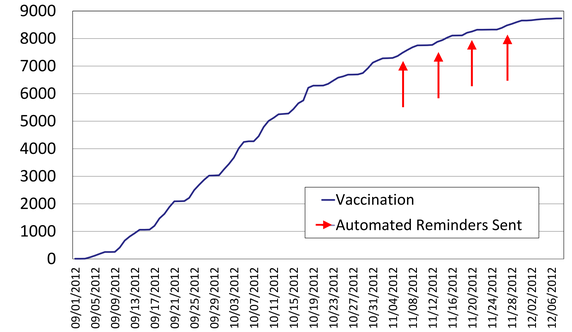
	Total Staff	Total Vaccine Completed	Percent Vaccination Completed	Total Declination	Percent Declination	Total Participation	Percent Participation
MC	4739	4564	96.31	167	3.52	4731	99.83
SOM	2651	2548	96.11	84	3.17	2632	99.28
TOTAL	**7390**	**7112**	**96.24%**	**251**	**3.40%**	**7363**	**99.63%**

Occupational Health Events and Vaccination Rate



	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
% Vaccination	58	86	92	96	96
Number of large OH Events	50	50	37	5	3

Cumulative Vaccinations over Flu Season



Conclusions

- When tracking thousands of HCW from different affiliated systems, an electronic database and automated alert system are essential to a MIV program.
- An added benefit of this system was a shift in responsibility for participation from OH to individuals and their supervisors, decreasing OH workload. OH and HR now focus their efforts on non-participants by reviewing a list of non-participants each week, targeting departments with low participation, and only contacting a handful of individual non-participants near the MIV deadline.
- In the future, manual data entry could be improved by scanning vaccine barcodes and employee IDs.