



Immunization Skills Institute (ISI):

Are We Making an Impact on Correcting and Refining Vaccine Administration Techniques?

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Abstract

BACKGROUND

Medical Assistants (MAs) are one of the top ten fastest growing occupations relied upon to provide immunizations in variety of settings. The skills and educational level of MAs vary, impacting the delivery of immunization services and the prevention of vaccine-preventable diseases. Immunization Skills Institute (ISI) classes have been implemented by licensed nursing personnel to teach MAs correct vaccine administration/storage techniques to ensure patient safety and positively impact immunization practices.

OBJECTIVES

To assess the impact of ISI training on the vaccine storage and administration practices of MAs.

METHODS

ISI was a four (4) hour training session that consisted of a didactic presentation with a hands-on "skill-development" laboratory led by licensed Public Health nursing personnel.

POPULATION:

A convenience sample of 152 MAs pre-registered for the ISI class via a secured, Los Angeles County Immunization Program (LACIP) website. Certified or registered MAs and senior MA students were eligible to participate. Licensed health care personnel were excluded (e.g., RNs, PAs, etc.).

MEASURES:

A. Pre-test: A ten (10) item survey was self-administered prior to the start of the ISI class. The pre-test assessed demographic, vaccine administration knowledge, attitudes and practice characteristics.

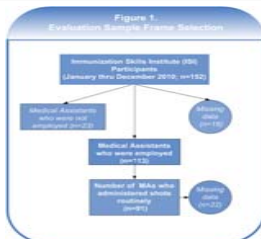
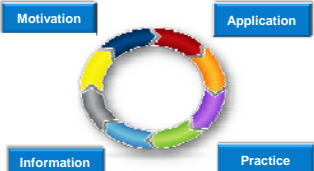
B. Post-test: A ten (10) item survey that re-assessed questions at pre-test along with five (5) additional items that assessed satisfaction with ISI class and solicited feedback for future sessions.

C. Two-month follow-up: A web-based, re-assessment of post-test items along with five (5) additional items to measure changes in practices since the ISI class in the workplace.

Goals and Objectives of ISI

- ✔ To promote a safe, effective, and caring immunization delivery system
- ✔ To recognize and support the important role of the MA in immunization delivery
- ✔ To improve the immunization practices of participating MAs
 - Competency-based self-assessment
 - Performance-based evaluation

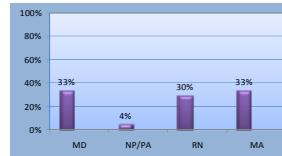
ISI is based on Adult Learning Principles



Vaccine Administration Practices: At Follow-up

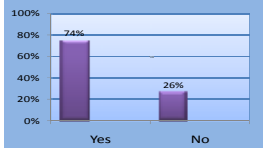
2 Month Follow-up Rate: 38/152 = 25%

Who did you receive training from (n=32)

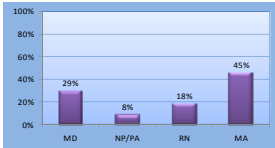


Vaccine Administration Practices: At Pre-test

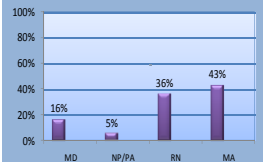
Did you ever receive immunization training (n=91)



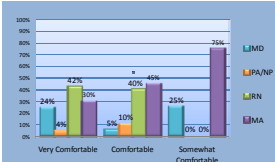
Who observed you giving shots (n=66)



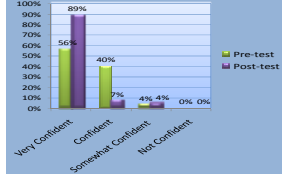
If yes, who did you receive training from (n=66)



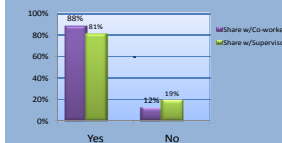
Level of comfort giving shots by profession (n=58)



Vaccine Administration Level of Confidence at Pre-test and Follow-up (n=32)



Sharing Vaccine Administration Practices with Co-workers and Supervisors (n=32)



DATA ANALYSES:

Univariate analyses were conducted to describe the evaluation sample at pre-test, post-test and a follow-up. Paired t-tests were conducted to assess improvements in vaccine administration knowledge, attitudes and practices at post-test in comparison to pre-test results. Statistically significant improvements were reported for individual items that reached a p-value of less than or equal to .05.

RESULTS

Among 152 participants, the MAs were **predominately 18 to 29 years old (56%); Latino (85%); and employed full-time (68%)** and completed their education through **vocational training programs (55%)**. Among the MAs who were employed and routinely administered shots (n=66), the majority had received training from other MAs followed by RNs, MDs and NPs/PAs. At post-test, there were **significant improvements** in knowledge with use of correct needle length for subcutaneous (p<.05) injections. MAs trained by other MAs **were less likely** to report high levels of comfort in comparison to MAs trained by other licensed professionals.

Fifty-five (84%) participants **identified at least three "aftercare" practices**. Of 152 participants, 38 (25%) participants completed a 2-month follow-up survey. Demographic characteristics of the follow-up group were similar to evaluation sample. At follow-up, **89% of participants reported "feeling confident" compared to pre-test levels of 56%**. Comfort with sharing new ISI skills was slightly higher with **co-workers (88%)** compared to with **supervisors (81%)**. Data showed that the **ISI class (consisting of video, lecture and a skills station) was very useful (91%)** and the **skills station was ranked as the most useful (89%) component**.

CONCLUSIONS

Preliminary data indicate MAs benefit from quality immunization training on vaccine storage and administration practices from licensed nursing personnel.

FUTURE PLANS:

- Collaborate with MA training programs to ensure proper delivery of vaccinations
- Begin collaborating with other public health divisions such as Emergency Preparedness and develop an ISI Train-the-Trainer module
- Provide training for other disciplines e.g. Pharmacists
- Evaluate MA immunization knowledge, attitudes and practices in greater depth

In collaboration with: **California Department of Public Health, Immunization Branch**

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