How To Cure The H1N1 Blues: A Quality Improvement Initiative

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Introduction

The H1N1 virus is responsible for increased morbidity and mortality in the pediatric population, especially among immunocompromised children. At the Cleveland Clinic's hematology-oncology outpatient clinic, 114 oncology and 58 sickle cell patients (n = 172) were receiving treatment in fall of 2009 during the time of the release and distribution of a special vaccine for H1N1. A need was identified to assist the families of these 172 children to easily access the H1N1 vaccine.

The purpose of the project was to decrease the risk of complicated infections associated with the H1N1 virus in a high risk population by developing and implementing a special H1N1 vaccination initiative. As project coordinators, two experienced pediatric hematology-oncology registered nurses identified the need for a special vaccination clinic. We planned and finalized the logistics for vaccine delivery, determined a way to educate families of the need and availability of the H1N1 vaccine, and identified evaluation indicators to measure overall program effectiveness.

Evaluation Study Objectives

The objective of this study was to evaluate the overall effectiveness of a special fall 2009 H1N1 vaccination initiative for 172 vulnerable, immunocompromised children receiving treatment at Cleveland Clinic's hematology-oncology outpatient clinic.

Program Description

As soon as the H1N1 vaccine was available, the two registered nurse project coordinators telephoned and mailed letters to the families of 172 on-treatment children enrolled in the hematology-oncology outpatient clinic. The purpose of the telephone calls and letters was to provide education regarding the need for the H1N1 vaccine and to inform the families of two special "off-hours" vaccine-only clinics. These two clinics were scheduled on a Saturday morning (October 31, 2009) from 8 am until noon and Wednesday evening (December 2, 2009) from 3 pm to 7 pm to enhance access for families who may have scheduling conflicts during weekdays. The clinics were located at the Cleveland Clinic pediatric outpatient hematology-oncology area since families were familiar with this location. Free parking was provided during the H1N1 clinics. To encourage vaccination of the children, the H1N1 vaccine was also offered free to immediate family members.

We attempted to pre-schedule patients and families as much as possible and registered the patients as they arrived. Our medical assistant then helped the parent enroll the family on the Ohio Department of Health website **https://h1n1vaccine.odh.ohio.gov** so the state public health agency could document who received the H1N1 vaccination (as is done with all vaccine recipients in Ohio and nationwide). We also gave the family information on pre-registering with the Ohio Department of Health prior to their arrival at the vaccination clinic.

After we received an authorization number and consent form, we vaccinated patients and immediate family members with the H1N1 (not seasonal flu) immunization at no cost to them or an insurer.

November 19, 2009

Dear Parents,

We are now immunizing patients against the H1N1 virus. We are recommending that your child and immediate family members receive this vaccine. Please call S20 at 216-444-3608 and make a nurse appointment to receive the H1N1 vaccine. If you have received the injection from your school or pediatrician's office, let us know so we can include this information in your medical record.

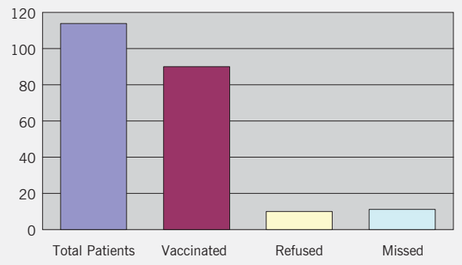
For your convenience we are having a H1N1 clinic on Saturday, Oct 31st from 8 am until noon and on Monday, November 2, 2009 from 3pm to 7 pm.

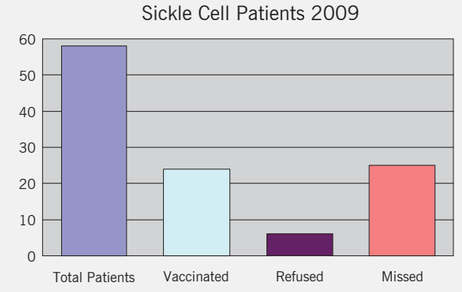
Sincerely,

S20 Nursing Team

Results

- Of the 114 oncology patients, 79% were vaccinated, 10% refused and 11% did not receive the vaccine.
- Of the 58 sickle cell patients, 41% were vaccinated, 11% refused and 48% did not receive the vaccine.
- Only one patient was diagnosed with a mild case of H1N1 after immunization which did not require hospitalization.





Conclusions and Lessons Learned

- Inviting individual families through telephone calls and mailed letters to one of two special H1N1 vaccination clinics increased compliance with vaccine administration and helped to decrease the incidence of H1N1 complications in a vulnerable group of immunocompromised pediatric patients.
- The following activities may have increased H1N1 vaccination accessibility for families:
  - Arranging the free vaccination clinics for either a Saturday morning or during an evening
  - Providing free parking
  - Locating the vaccination clinic in a familiar place for families
  - Offering free H1N1 vaccinations for immediate family members
  - Administering a new and unique influenza vaccine by health care providers who have an established relationship with the child and family and are experts regarding the health care needs of the child with oncology or sickle cell conditions
- The following lessons were learned:
  - Additional education may be needed given that 10% of the patients did not receive the vaccine since their parents refused vaccination because of negative information they received from the media about the H1N1 vaccine.
  - Overall, the H1N1 vaccination was well tolerated in this group of vulnerable children. This information may assist parents' decision-making and increase rates of influenza vaccinations in the future.
  - The Cleveland Clinic pediatric hematology-oncology clinic has a standing order to administer the influenza vaccine to all eligible patients. The standing order streamlines the process and may increase future vaccination rates.
  - A portion of families were disenfranchised and consistently experience various barriers in accessing needed health care services for their children. Future initiatives could include collaborations with community-based agencies located in neighborhoods to provide needed services, such as influenza immunizations.

In 2010, the H1N1 vaccine will be administered as part of the seasonal influenza immunization, so the rates of children receiving the H1N1 vaccine may be higher due to this bundling of the H1N1 vaccine with the usual flu vaccine. But the lessons learned in this initiative may be applicable to pandemic influenza planning and future unique vaccination efforts. Continued collaborations between a major medical center and the Ohio Department of Health may assist in reaching a vulnerable group of children and increasing influenza vaccination rates.

Acknowledgements

Kathy Bielek, RN, Nurse Manager S20

All of our coworkers for extending their workdays to facilitate the vaccination clinic and for giving us the time and assistance in preparing this poster.

Mary Beth Zeni, RN, Nursing Research and Innovation