

Research Article

Presence of Spanish-Language Information on Selected State Health Websites during a Period of Limited H1N1 Vaccine Availability

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Abstract

Introduction: A challenge during the early months of the 2009-2010 H1N1 influenza pandemic was how to inform the public about availability of vaccine when vaccine supply was limited to certain provider settings and/or patient subgroups. We conducted a situational assessment of Spanish-language information on the health department websites of states with substantial Hispanic populations, focusing on information that persons would need to identify whether they were eligible to receive H1N1 vaccine at that time and where vaccine was available.

Methods: We conducted a cross-sectional abstraction of specific H1N1 vaccine-related data elements from state health department websites for the 10 states with the highest percentage of Hispanic population. Data were collected from November 3-8, 2009, when vaccine was available only to certain target populations. Data elements included: Spanish-language information on target populations for vaccination, local availability of vaccine, hotline or other telephone source of H1N1 vaccine information, and cost or insurance coverage.

Results: Spanish-language information about H1N1 vaccine was highly variable across the 10 state health websites; 3 states had complete information for all data elements examined, while 2 had almost no Spanish-language information. H1N1 vaccine target population was the most common piece of Spanish-language information, available for 8 states.

Conclusions: Public health officials in areas with substantial Spanish-speaking populations should have a plan for the dissemination of Spanish-language information about vaccine availability and other time-sensitive or rapidly changing elements as part of their emergency preparedness efforts.

ABBREVIATIONS

ACIP: US Advisory Committee on Immunization Practices

INTRODUCTION

In late March and early April of 2009, the novel H1N1 influenza A virus outbreak was detected in Mexico and subsequently in the United States [1]. On June 11, 2009, the World Health Organization raised its pandemic alert level to the highest level, phase 6, indicating widespread community transmission [2].

In August 2009, the US Advisory Committee on Immunization

Practices (ACIP) identified five subpopulations to target H1N1 vaccination [3]. The ACIP recommendations noted that vaccine shipments were anticipated to begin in mid-October, via a centralized ordering and shipping system coordinated at the federal level. States were given a weekly allotment of vaccine, which from October to early December 2009 was substantially less than the number of persons in the five ACIP target populations. States had flexibility and autonomy in determining how to distribute the limited supply of vaccine geographically, selecting which providers would receive vaccine, which patient populations would be targeted, and whether persons outside of those target groups would be turned away.

With this shared federal-state model, federal information sources could provide general information about H1N1 vaccine, but specific implementation parameters (e.g., when different providers would begin to receive vaccine, which patient subgroups were allowed to be vaccinated when supply was limited) were unique to each state. Thus, states had to develop their own mechanisms to inform their populations about the changing availability of H1N1 vaccine over the course of the season. Moreover, because details about eligible populations, provider sites, and vaccine availability changed frequently over the initial weeks of the vaccine campaign as the vaccine supply increased, information-sharing mechanisms needed to be well-suited to frequent updates. One such mechanism is posting information on the internet.

An additional challenge for many states was how to reach populations with limited English-speaking ability. Hispanics are the largest minority group in the US, at the time representing about 15% of the population, with an estimated 44% of Hispanic adults speaking English "less than very well" [4].

We conducted a situational assessment of information on the health department websites of states with substantial Hispanic populations, to document the presence of Spanish-language information about H1N1 vaccine, at a point in time where vaccine supply was limited to certain provider settings and/or patient subgroups. We focused our assessment on information that persons would need to identify whether they were eligible to receive H1N1 vaccine at that point in time and where vaccine would be available.

MATERIALS AND METHODS

Data were collected from November 3-8, 2009. At this time, vaccine had been available for about a month but states were limiting H1N1 vaccine to certain target populations; no state had begun to allow H1N1 vaccine to be administered to the general public yet. Thus, this timeframe provided an opportunity to understand the extent to which Spanish-language website information would be available to reach persons in target populations. We chose a one-week timeframe because states were changing their H1N1 vaccine policies rapidly, and we wanted to focus on this critical period of limited vaccine availability.

Using US Census Bureau data, we selected the ten states with the highest percentage of Hispanic or Latino populations: Arizona (30.8%), California (37.0%), Colorado (20.3%), Florida (21.5%), Illinois (15.2%), Nevada (26.5%), New Jersey (16.7%), New Mexico (45.6%), New York (16.8%), and Texas (36.9%) [5]. We chose 10 states to focus on a manageable number to analyze in a one-week study, and we chose these particular states to focus on those where we would expect Spanish-language information on H1N1 vaccine to be most needed, based on the size of the Spanish-speaking population.

We used the Google search engine to identify each state's health department website. One of the researchers who is a native Spanish speaker (CME) accessed each website and documented the presence of specific elements of H1N1 vaccine information presented in Spanish, using a standardized data abstraction tool. We evaluated each website once during the study week and

printed screen shots to preserve the presentation of data at that specific point in time. We documented whether Spanish-language information was present for the following 5 elements:

- Spanish-language portal or direction to a Spanish-language link (e.g., to "gripe porcina" or "gripe influenza A H1N1") on the site's main page.
- Spanish-language information on target populations for vaccination.
- Spanish-language information on local availability of the vaccine. This could include names/contact information for specific health departments, private provider sites, or mass vaccination clinics, OR a telephone number to call for upcoming locations.
- Spanish-language information related to cost and/or insurance coverage for H1N1 vaccine.
- Spanish-language hotline or other telephone source of H1N1 vaccine information.

These data were summarized (Table 1) to facilitate comparisons across states.

RESULTS AND DISCUSSION

The health department website for all ten states had a specific area for H1N1 information, with a prominent link to this area on their health department's main pages; 9 of 10 had links to an external website (e.g., cdc.gov, flu.gov) where general Spanish-language information was available.

Six states (60%) had a portal or direct link to Spanish-language H1N1 information within their state health website (Table 1); in two states (Nevada and New Mexico), this portal was labeled in Spanish, and in 4 states it was labeled in English. H1N1 vaccine target population was the most common piece of Spanish-language information, available for 8 states. This information was provided within the state's website for 4 states, while another 4 states linked to an external Spanish-language page with target population information. Spanish-language information on local availability of vaccine was limited (40%), as was Spanish-language information on cost of the vaccine (30%). More common was a Spanish-language telephone hotline (7 states), offering general information about H1N1 vaccine.

The completeness of Spanish-language information on state health websites varied, from 0 to 5 elements documented as being present. Three states (Colorado, Nevada, and New Mexico) had all five elements available in Spanish, while two states (Arizona and New York) had none.

This situational assessment demonstrates wide variation in Spanish-language information for the general public on state health websites during a critical time in the H1N1 vaccine campaign, when vaccine availability was rapidly changing. Of the ten states with the largest proportion of Hispanics, only three had complete Spanish-language information on who was eligible to receive vaccine, how to find a location for vaccination, and at what cost. In contrast, two states had almost no Spanish-language information posted.

Table 1: Presence of Spanish-Language H1N1 Vaccine Information on State Health Department Websites, November 3-8, 2009.

State	Whether Information Available in Spanish					Total Number of Elements Present
	Spanish-language portal or direct link	Target population	Local vaccine availability	Cost/ insurance coverage	Hotline	
Arizona	No	No	No	No	No	0 of 5
California	No	Yes	No	No	Yes	2 of 5
Colorado	Yes	Link	Yes	Yes	Yes	5 of 5
Florida	Yes	Link	No	No	Yes	3 of 5
Illinois	Yes	Link	No	No	Yes	3 of 5
Nevada	Yes	Yes	Yes	Yes	Yes	5 of 5
New Jersey	Yes	Link	No	No	No	2 of 5
New Mexico	Yes	Yes	Yes	Yes	Yes	5 of 5
New York	No	No	No	No	No	0 of 5
Texas	No	Yes	Yes	No	Yes	3 of 5

Note: "Link" indicates that the health department website provided a link to an external Spanish-language page with information on target populations for H1N1 vaccine.

The issue addressed in this study is important. Hispanics are the largest minority group in the US; a large proportion of Hispanic adults are not proficient in speaking English [4], and language barriers were cited by public health officials as a potential cause for H1N1 under vaccination among Hispanics [6]. In addition to language barriers, there were some early indications that Hispanics may have experienced a disproportionate burden of H1N1 disease in certain subgroups [6]. During the one-week period of this study, H1N1 vaccine supply was very limited, and states were making incremental additions to both the provider settings and patient target groups that were allowed to receive vaccine. The National H1N1 Flu Survey indicates that of the 24 million vaccine doses administered in the United States through mid-November, 85% went to persons in the five target groups [7]. Thus, dissemination of accurate and up-to-date H1N1 vaccine information in both English and Spanish would help to ensure that high-risk Hispanic persons had equitable access to the limited supply of vaccine.

The H1N1 vaccination campaign was a major public health initiative, with a substantial amount of federal funds used to purchase and distribute vaccine. Several factors made this situation particularly challenging. First, because states had flexibility and autonomy in determining the specific target groups and vaccine distribution methods, communication about H1N1 vaccine required state-specific information. Although Spanish-language documents were available on cdc.gov and flu.gov, these national information sources focused on general information about the vaccine, rather than state-specific information about vaccine availability; thus, these national resources had limited usefulness in helping the general public understand how to access H1N1 vaccine in their own state. Second, the compacted and unpredictable timeline for H1N1 vaccine production and distribution created a situation where information needed to be updated frequently. Finally, states were dealing with myriad H1N1-related tasks, such as enrolling vaccine providers, implementing systems for vaccine ordering and distribution, and responding to an onslaught of questions from the media and the general public. Programmatic and staffing constraints likely limited the amount of time and energy that could be devoted to

assessing the adequacy of information for non-English-speaking populations.

This study calls into question whether state officials had included updating website information for the general public in their emergency preparedness and/or pandemic influenza planning efforts. Certainly, the internet is not the only mechanism for informing the general public, but it does have the advantage of consistent access to information, particularly outside of normal business hours, and the ability to reach a broad cross-section of the population. During the 2009 H1N1 pandemic, states communicated with health care providers pertaining to vaccine supply and use of vaccine for priority populations. However, it is unreasonable to expect that communication to the general public would be handled through providers; the relay of information would be very inefficient and likely would exclude those who do not have a regular health care provider. States were encouraged to reach out to traditionally underserved groups, including Hispanic populations, through the use of ethnic-specific media, faith-based and other community groups, and culturally and linguistically appropriate health educational materials [6]. However, the rapid pace of the first weeks of the vaccination campaign, when states were incrementally adding new patient groups and provider settings for vaccine availability, made it unlikely that any of these targeted methods would feature the most up-to-date information. Rather, certain elements of communication to the general public need to occur from the central point of decision-making, and information on state websites is likely to be a key component of the general communication strategy in a pandemic situation.

We did not attempt to link the presence of Spanish-language information with H1N1 vaccination receipt for Hispanic populations during the same time period, as time-specific vaccination data were not available. A nationally representative online survey conducted at the end of the season found no difference between the H1N1 vaccination rates for White and Hispanic groups [8], suggesting equivalent access to vaccine, yet these data demonstrated interesting differences in location of vaccination, with White persons reporting relatively equal use of physician offices and public health department flu vaccine clinics

while Hispanics predominantly were vaccinated at physician offices. It is not known whether the Hispanic populations' lower use of public health H1N1 flu vaccine clinics was related to lack of information about the location and time of vaccination clinics.

There were several other limitations to this study. Because this was a short-term situational assessment, we only evaluated the presence of key pieces of information that would allow Spanish-speaking persons to determine whether and where they should seek vaccination. We did not assess the quality of information about H1N1 vaccine. Although several organizations have tried to develop criteria to evaluate online health information, the techniques have not been widely applied and the validity is not well established [9,10]. Thus, our results should thus be viewed as descriptive, not evaluative. This study was limited to a one-week period. States with incomplete Spanish-language information during that week may have been in the process of improving and updating the information available to the public; therefore, these findings cannot be generalized to the entire 2009-2010 influenza season. Also, states were selected to represent those with the largest proportion of Latino populations in the US; the results may not be generalizable to other states. We did not systematically document the presence of English-language information during the same period, so we cannot make any statements comparing the presence of Spanish- vs English-language information. Finally, the websites analyzed were for state health departments and do not include local websites for cities or counties with high proportions of Hispanic residents. It is possible that Spanish-language information was more complete on those sites.

CONCLUSIONS

During a period of limited vaccine supply and rapidly changing information about vaccine target groups and setting, the presence of Spanish-language information about H1N1 vaccine on state public health websites was highly variable across the 10 states with the greatest proportion of Hispanic residents. In planning for the future, public health officials in areas with substantial Spanish-speaking populations should have a plan for the dissemination of Spanish-language information about rapidly changing and time-sensitive information as part of their emergency preparedness efforts.

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Authors' contributions

CME assisted in designing the data abstraction instrument, conducted the abstraction of website data, calculated the summary data, and participated in drafting the manuscript. SJC conceived of the study, participated in designing the data abstraction instrument, reviewed the data abstraction, and participated in drafting the manuscript. All authors read and approved the final manuscript.

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