

Influenza-Related Emergency Room Visits, Berkeley, 2005-2007

SUMMARY

Background

Why is this Topic Important?

Influenza is a respiratory viral illness that annually impacts between 5% and 20% of Americans, causing 36,000 deaths and 200,000 hospitalizations annually. Adults aged 65 years and older, children under 2 years of age, and persons with chronic medical conditions are at the greatest risk of serious illness and death. Vaccines can prevent or reduce the severity of influenza. Emergency room data first became available to the Berkeley Health Department from a state agency in 2005. Tracking emergency room visits for influenza is a useful surveillance tool in the event of an influenza pandemic.

Purpose of this Report

This report statistically describes who in Berkeley was treated in an emergency room (ER) for a diagnosis of influenza or pneumonia from 2005 to 2007. A diagnosis of influenza or pneumonia was considered potentially "influenza-related."

FINDINGS

- Each year about 200 Berkeley residents have an influenza-related emergency room visit.
- Females have higher rates of influenza-related ER visits than males.
- The rate of influenza-related ER visits is greatest in residents under 5 years of age and residents 65 years and older.
- Compared to other race/ethnicities, African Americans have the highest rates.
- Berkeley residents living in zip codes of South and West Berkeley (94702, 94703, 94710) have high rates compared to other zip codes.

These findings are consistent with previously documented patterns of health inequities in Berkeley and national data that show that African Americans and Latinos are less likely than other race/ethnic groups to get preventive interventions such as vaccinations. This in turn may be related to barriers to accessing health care: lack of health insurance, not having a regular medical home/primary care provider, linguistic isolation, cultural beliefs and practices, difficulties in transportation, or scheduling difficulties (after work shifts).

Recommendations/Follow-up

The following recommendations encompass the spectrum of primary to tertiary prevention and also aims to influence upstream determinants of health, which contribute to health inequities.

A. Improved Surveillance



1. Data on hospitalization and visits to emergency rooms represent only the most severe cases of influenza-related morbidity. The Public Health Division should continue discussions with Medi-Cal and Kaiser Permanente-North for sharing data on primary care visits in which influenza-related morbidity was diagnosed. These data will help more fully estimate the magnitude and distribution of the problem.
2. Surveillance should be extended to vaccine coverage. The same data sets for primary care mentioned above may include data to estimate vaccination coverage. These data can be used to identify population groups that may merit more intensive follow-up to achieve higher rates of vaccination and monitor the impact of interventions to improve vaccination coverage.
3. The Public Health Preparedness Program should consult with surrounding health jurisdictions to identify any best practices, especially those for identifying subgroups of vulnerable populations and for conducting real-time influenza surveillance.
4. Kaiser Permanente-North is already participating in a California Influenza Surveillance Project. The PHD should explore whether a subset of data on Berkeley residents might be available for reporting and statistical analyses.
5. The California Immunization Registry (CAIR) and the Bay Area Regional Registry (BARR) can provide flu vaccination rates for residents whose physicians are participating. The Public Health Division should continue its efforts to recruit providers to the registry.

B. Improved Vaccination Coverage

1. The Public Health Division should evaluate its strategies for providing seasonal flu vaccine. In October 2008, a mass dispensing exercise demonstrated the capability of vaccinating a large number of people of all ages in a few hours on a single day. In previous years, flu clinics involved several days of activities at numerous locations. The mass dispensing boosted the total annual number of vaccines dispensed by the Division to the highest level ever recorded in Berkeley (2,971). There is an opportunity to examine cost-benefit, impact, and resources to select and/or expand a given dispensing model.
2. The Public Health Preparedness Program and Immunization Program should consult with surrounding health jurisdictions to identify any best practices, especially those for identifying and reaching out to subgroups of vulnerable populations.

C. Improved Public Health Preparedness Infrastructure to respond to Pandemic Influenza

1. Continue training of Public Health Division staff in the use of the incident command system (ICS) to manage public health emergencies and the training of public health nurses in the natural history, diagnosis, treatment, and public health follow-up of specific communicable diseases with the potential to cause public health emergencies.
2. Continue developing automated tools (such as the rapid epidemiologic assessment) for rapid assessment of needs in a public health emergencies, and tools for case management public health nurses (Berkeley Outbreak Management System) involved in outbreak and contact investigations.



3. Continue to participate in local, regional, and statewide exercises to develop and test capabilities for emergency public health response.

D. Dissemination of this Report (and lay summary)

1. Share this report with Alta Bates Medical Center, local providers and community-based organizations such as Lifelong Medical Care clinics and UC Berkeley's Tang Student Health Center that play a role in improving vaccination coverage.
2. Share this report with local pharmacies that offer flu shots to 1) acknowledge their efforts (albeit for a fee) and 2) inform them of the large public health issues involved in preventing adverse effects of influenza.
3. Share a lay summary of this report with the Berkeley Unified School District, School-Linked Health Services, and child care providers, and emphasize CDC's new focus on childcare and school age children as important sources of community flu transmission.
4. Utilize a fuller array of City resources and avenues for communicating the importance of flu vaccination; make sure messages are distributed in other languages and in a manner that is culturally appropriate for all of Berkeley's diverse communities. Evaluate and address barriers to flu vaccination, including specific sub-populations or neighborhoods with low flu vaccination rates.

