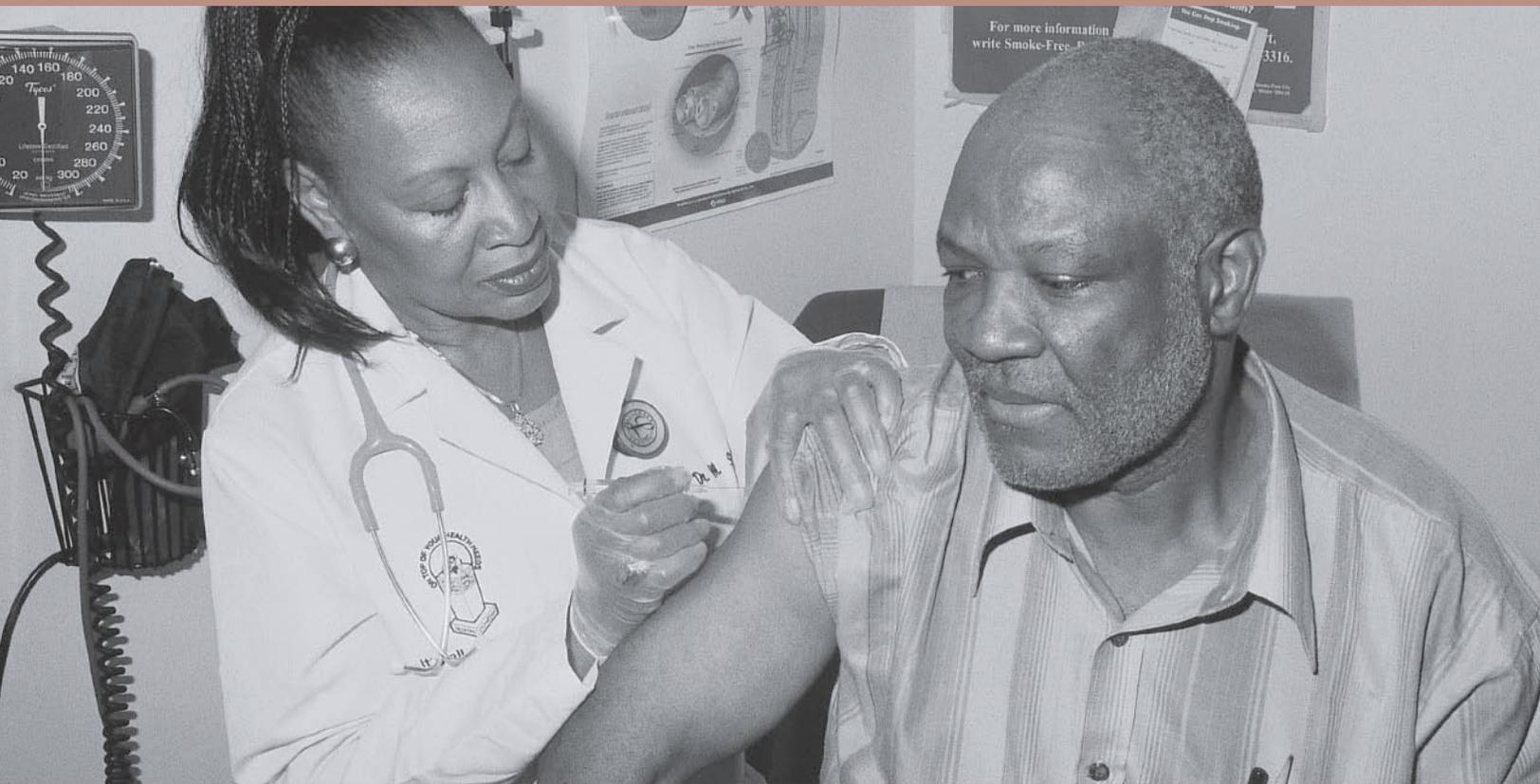


# Flu Shots Save Lives:

## Why Aren't More Central Brooklyn Residents Getting Vaccinated?



A Neighborhood Report From the  
Brooklyn District Public Health Office



THE NEW YORK CITY DEPARTMENT  
of HEALTH and MENTAL HYGIENE  
Michael R. Bloomberg, Mayor  
Thomas R. Frieden, M.D., M.P.H., Commissioner

[nyc.gov/health](http://nyc.gov/health)

## Key Findings

### 1. Neighborhoods in Central Brooklyn have low flu vaccination rates and high flu-related mortality rates.

- Adult flu vaccination rates in Central Brooklyn are among the lowest in New York City. In some neighborhoods, fewer than 40% of adults 65 and older get a flu shot each year.
- Citywide, flu vaccination rates are lower for blacks than for whites. Among those 65 and older, only half (51%) of black New Yorkers receive a flu shot each year, compared with two-thirds (67%) of white New Yorkers.
- Among people aged 65 to 84, the death rate from influenza and pneumonia is 30% higher in Central Brooklyn than in the rest of the borough.

### 2. Skepticism about the flu vaccine and a mistrust of medical care are widespread in Central Brooklyn.

- Fewer than half (47%) of residents surveyed think flu shots are effective. Not surprisingly, those who are unsure that the flu shot is effective were only one third as likely to have been vaccinated.
- Fewer than 4 in 10 (38%) Caribbean- and African-American Central Brooklyn residents think that people in their racial/ethnic group receive the same medical care as others.
- 1 in 3 (33%) Caribbean- and African-American Central Brooklyn residents think that people in their racial/ethnic group cannot trust doctors; a similar proportion (32%) believe that Caribbean- and African-Americans should be suspicious of modern medicine. Residents who expressed these views are one third as likely to get a flu shot.

### 3. Health care providers in Central Brooklyn can do more to improve vaccination rates.

- Only 6 in 10 (59%) residents surveyed say their doctors recommend a flu shot. Those whose doctors recommend the shot are 3½ times more likely to get vaccinated.
- Local medical providers believe that the flu shot is safe and effective.
- Very few providers, however, have methods in place – such as a patient reminder system, chart-flagging, or standing orders – to identify and encourage high-risk patients to be vaccinated.

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## Acknowledgements

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## This Report

**Influenza (“the flu”) is a leading cause of death.** Nationally, the flu causes approximately 226,000 hospitalizations and 36,000 deaths each year.<sup>1,2</sup> In New York City during 2004, influenza and pneumonia (often a complication of the flu) caused more than 3,000 deaths, making it the third leading cause of death overall. Approximately 85% of flu deaths were among persons 65 and older.<sup>3</sup>

Since the flu is spread by coughing and sneezing, almost anyone can get it. However, the likelihood of the infection causing severe illness varies. The elderly, young children, and people with long-term health problems, such as asthma and diabetes, are at highest risk for hospitalization and death.

**The flu shot is highly effective in preventing the flu.** In addition, if vaccinated people do get the flu, they are less likely to get seriously ill or die.<sup>4</sup> Since the flu is spread from person to person, vaccination can slow transmission and help protect the community.

**The flu vaccine is very safe.** Like other vaccines, it may occasionally cause soreness at the site of the injection, but serious problems from flu shots are very rare.

This report can help health care providers, community-based organizations, and others understand and address Central Brooklyn’s low flu vaccination rates. It examines vaccination and flu-related mortality rates and reveals health disparities. The report discusses factors contributing to low vaccination rates and offers recommendations for improving these rates.

### The Flu or a Cold?

The flu is a respiratory illness caused by the influenza virus. Its chief symptoms are cough, fever, and body aches. Many people use the word *flu* to refer to a cold or a brief illness involving muscle aches, nausea and vomiting, fever, sinus congestion, and/or coughing. **Colds and most other such illnesses are caused by viruses, but they are not the flu.**

The flu is typically much more severe than a cold, appearing suddenly and lasting a week or longer.

## About the Data

Data summarized in this report are drawn from multiple sources.

- The New York City Community Health Survey (CHS) from 2002 and 2003 provided the data on flu immunization rates during the 2001-2002 and 2002-2003 flu seasons, respectively. The CHS is a telephone survey administered to a representative sample of adults aged 18 and older from every neighborhood in New York City.
- Influenza and pneumonia mortality data were compiled by the NYC DOHMH Office of Vital Statistics.
- Data on flu vaccine-related attitudes and practices of Central Brooklyn medical providers and residents were gathered during a multifaceted study (see *Study Methods*) initiated by the NYC DOHMH’s Brooklyn District Public Health Office.

## Study Methods

Between May and October 2005, the Brooklyn District Public Health Office conducted a study consisting of 3 components: 1) interviews with local medical providers; 2) surveys of community residents; and 3) focus groups with community residents.

*Medical Provider Interviews:* Interviews were conducted at 10 health care settings in Bedford-Stuyvesant. At least 1 provider from each type of setting – hospital-affiliated clinic, large free-standing clinic, small group practice, and solo private practice – was interviewed. Six of the 10 sites were either small group or solo provider practices. A total of 11 interviews with medical providers (9 doctors, 2 nurses) were conducted.

*Community Survey:* A self-administered questionnaire was distributed to community residents attending services and meetings at 9 faith-based institutions in Central Brooklyn.<sup>5</sup> All 337 respondents indicated that they were aged 50 or older and were Caribbean- or African-American. More than 90% of participants had a personal doctor and health insurance, approximately one-third had a household income of less than \$25,000, and 4 in 10 were foreign-born (mainly from Caribbean countries).

*Focus Groups:* Focus group participants were recruited among residents who had completed the community survey. Four focus groups were conducted – 2 with residents who had received a flu shot in the last year and 2 with those who had not. At least 9 community residents participated in each group, and each discussion lasted approximately 1½ hours.

### Community-Based Participatory Research

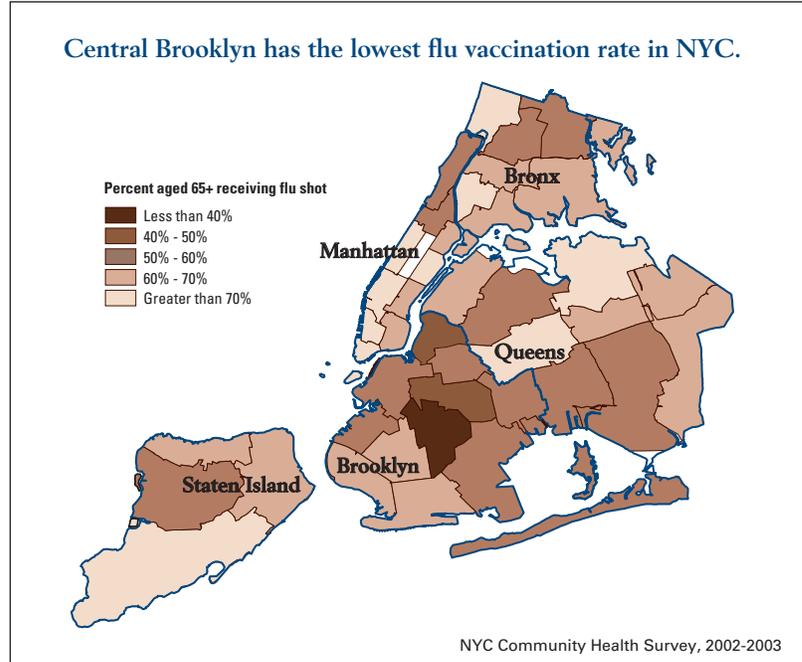
This project uses the Community-Based Participatory Research model for working on health issues with community members. Instead of conducting a study *about* the community, it is a study *with* the community. The Central Brooklyn Flu Steering Committee was established in the spring of 2005, its members drawn from the Borough of Brooklyn Ecumenical Advisory Group. During its first year, the Steering Committee developed and implemented the study. Currently, the committee is applying lessons learned to community educational campaigns.

## 1. Neighborhoods in Central Brooklyn have low flu vaccination rates and high flu-related mortality rates.

**Vaccination rates** for people 65 and older vary dramatically by New York City neighborhood. In some parts of the city, flu vaccination rates are higher than 70%; in others – including many Brooklyn neighborhoods – rates are 50% or lower. Over 2 recent flu seasons (between 2001 and 2003), the Flatbush area in Central Brooklyn had the lowest vaccination rate, 37%.<sup>6</sup>

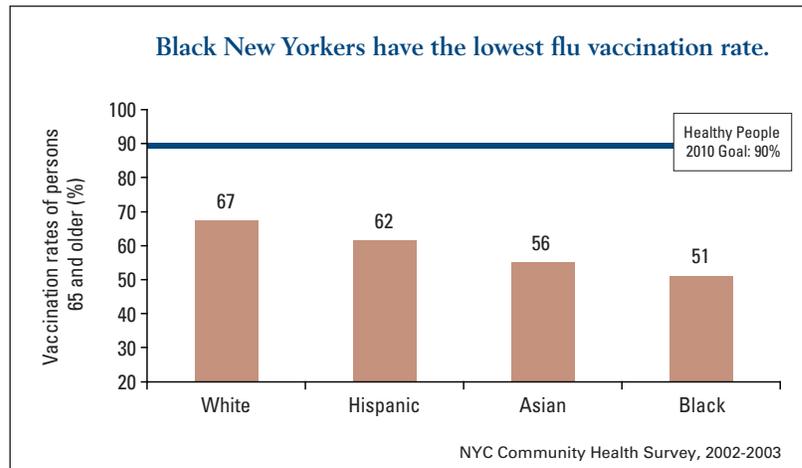
Low neighborhood demand for the vaccine was evident during the flu vaccine shortage of 2004-2005. In response to this shortage, DOHMH provided free vaccinations at clinic sites in each of the 5 boroughs. The Central Brooklyn clinic in Crown Heights provided the lowest average number of vaccines per clinic day of any site in the city. Other clinics in Brooklyn and elsewhere vaccinated up to 4 times as many people per day.

Central Brooklyn has the lowest flu vaccination rate in NYC.



**Racial and ethnic disparities** in flu vaccination rates are substantial. During the 2001-2003 flu seasons, two-thirds (67%) of white New Yorkers aged 65 and older were vaccinated, compared with only half (51%) of black New Yorkers in the same age group.<sup>6</sup> Although vaccination rates have improved over the last 3 decades, all the city's racial/ethnic groups remain far below the nation's Healthy People 2010 flu vaccination goal of 90%.<sup>7</sup>

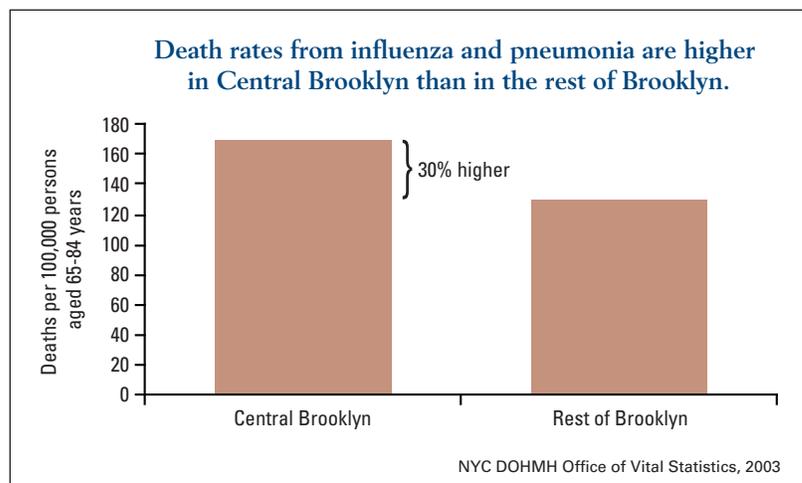
Black New Yorkers have the lowest flu vaccination rate.



**Flu-related deaths** vary by neighborhood and race/ethnicity. For those aged 65 to 84, the death rate from flu-related causes is about 30% higher in Central Brooklyn neighborhoods compared with the rest of Brooklyn.

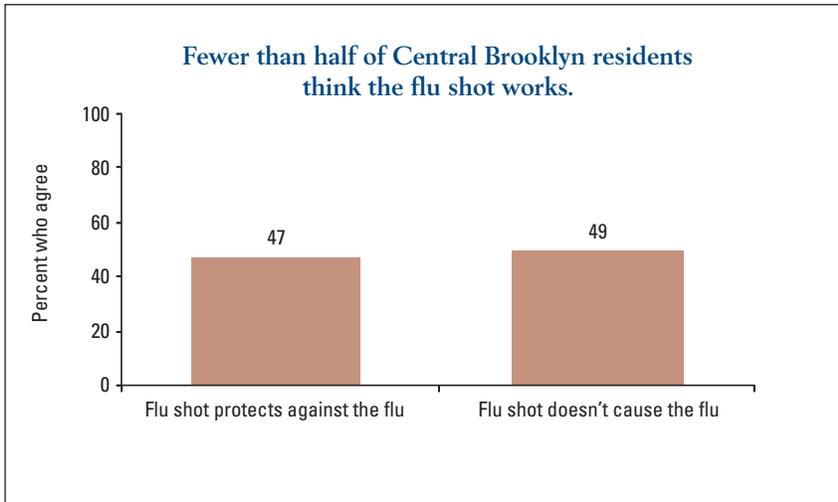
Similarly, citywide, blacks aged 65 and older die from influenza and pneumonia at higher rates than whites in the same age group.<sup>8</sup>

Death rates from influenza and pneumonia are higher in Central Brooklyn than in the rest of Brooklyn.



## 2. Skepticism about the flu vaccine and a mistrust of medical care are widespread in Central Brooklyn.

**Skepticism about the flu shot** is high among community residents 50 and older. Fewer than half (47%) surveyed think that the flu shot is effective protection against the flu. And half (51%) believe that the flu shot may *cause* the flu. Residents skeptical about the shot were one third as likely to have been vaccinated.<sup>9,10</sup>



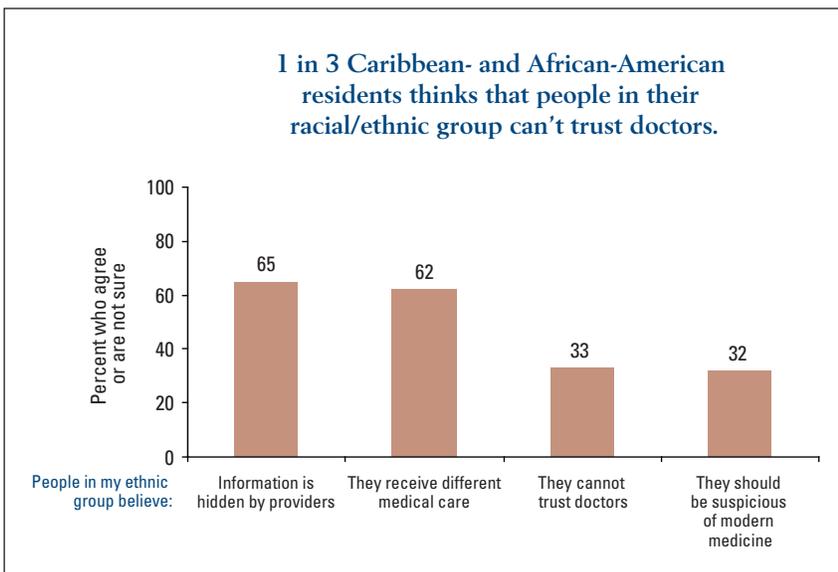
### What people said:

*"The rumor is that if you take this shot you are going to get sick."*

*"I got the shot, but my wife believes that the flu shot causes the flu."*

*"More people told me **not** to get the flu shot than told me to get it."*

**Mistrust of medical care** is another reason people don't get flu shots. Most Central Brooklyn residents (62%) surveyed think that people in their racial/ethnic group may get different medical care than other groups. About 1 in 3 (33%) Caribbean- and African-American residents think that people in their racial/ethnic group cannot trust doctors. A similar proportion (32%) believe that Caribbean- and African-Americans should be suspicious of modern medicine. Those expressing such suspicions were one third as likely to have had a flu shot. Many community residents report preferring home remedies or their own cultural practices as a means of staying healthy.



### What people said:

*"Some people say, 'I don't know what they're putting in my body and I don't trust it – period.'"*

*"You can't go to the doctor and think that they are the end-all. You have to use common sense."*

*"A lot of people take care of themselves. When I was young, if I was sick I would go to my grandmother's and she would give me something and I would be well."*

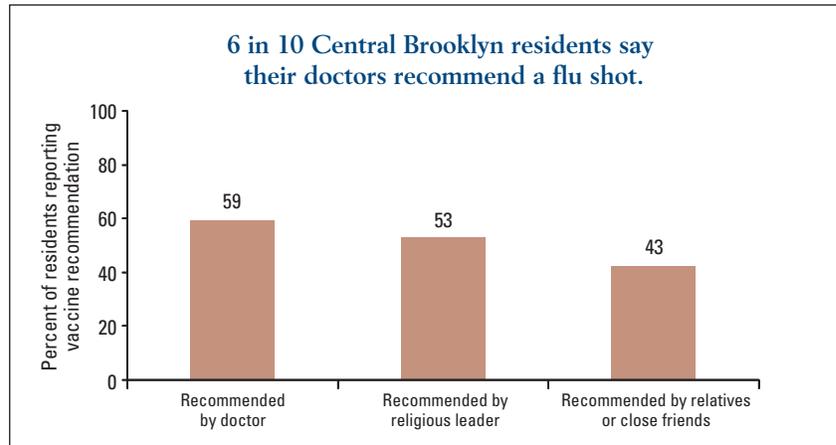
*"It is normal for people of Caribbean background to use herbs and spices."*

### 3. Health care providers in Central Brooklyn can do more to improve vaccination rates.

All doctors and nurses surveyed in Bedford-Stuyvesant say they recommend the flu shot to high-risk patients. These local medical providers believe that the flu shot is safe and effective, and that it reduces hospital admissions.

Only 56% of residents surveyed believe that the flu shot is readily available. Whether the flu shot is perceived as easily available is based, in part, on whether health care providers and others promote its importance. According to residents, doctors are more likely to recommend flu shots than are faith leaders or friends and family. However, only 6 in 10 (59%) residents aged 50 and older say a doctor encouraged them to get vaccinated. A doctor's recommendation is powerful. Those whose doctors recommended the vaccine were 3½ times more likely to have been vaccinated.

Although doctors recognize the importance of the flu shot and know that their recommendations are influential, most do not have systematic methods to ensure that all patients who need flu shots get them. Central Brooklyn providers often recommend the flu shot only to those patients who schedule appointments during flu season. Few providers use a patient reminder system, chart-flagging, or standing orders to identify and prompt high-risk patients to be vaccinated.



#### What people said:

*"My doctor strongly urged me to get the shot. He said that I was at risk ... I hesitated, but I decided to take it."*

*"I'm asthmatic, so I **must** get [the flu shot]."*

#### References/Technical Notes

1. Thompson WW, Shay DK, Weintraub E, et al. Influenza associated hospitalizations in the United States. *JAMA*. 2004;292:1333-1340.
2. Thompson WW, Shay DK, Weintraub E, et al. Mortality associated with influenza and respiratory syncytial virus in the United States. *JAMA*. 2003;289:179-186.
3. Bureau of Vital Statistics, New York City Department of Health and Mental Hygiene, 2004.
4. Yu T, Farish S, Jenkins M, Kelly H. A meta-analysis of effectiveness of influenza vaccine in persons aged 65 years and over living in the community. *Vaccine*. 2002;20: 1831-1836.
5. Since findings of the community survey are based on a convenience sample, percentages may not be representative of the entire Central Brooklyn population. Faith institutions within the following zip codes were surveyed: 11203, 11205, 11206, 11207, 11208, 11212, 11213, 11216, 11221, 11225, 11233, 11236, 11238 or 11239. Surveys were anonymous and available in English or Haitian Creole.
6. New York City Department of Health and Mental Hygiene, Community Health Survey, 2002 - 2003.
7. United States Department of Health and Human Services, Healthy People 2010: Understanding and Improving Health. Available at: [www.healthypeople.gov](http://www.healthypeople.gov)
8. Bureau of Vital Statistics, New York City Department of Health and Mental Hygiene, 2003. For this analysis, Central Brooklyn includes CD 303, 308, 316 and 317 (Bedford-Stuyvesant, Crown Heights, Brownsville and East Flatbush).
9. Adjusted odds ratios are reported for all associations.
10. To assess attitudes about the flu vaccine and the health care system, community residents were asked to respond to statements on a 5-point scale: strongly agree, agree, unsure, disagree or strongly disagree. Responses were analyzed as dichotomous, i.e., as a favorable or unfavorable attitude. Statements to which residents were asked to respond included:
  - I think the flu shot causes the flu.*
  - I think the flu shot keeps a person from getting the flu.*
  - This year a flu shot was easily available to me.*
  - People of my ethnic group cannot trust doctors and health care workers.*
  - People of my ethnic group should be suspicious of modern medicine.*
  - People of my ethnic group receive the same medical care from doctors and health care workers as people from other groups.*
  - Doctors and health care workers sometimes hide information from patients who belong to my ethnic group.*

## Recommendations to Improve Flu Vaccination Rates

The adult influenza vaccination rate in Central Brooklyn is low; the causes include skepticism about the flu shot, a mistrust of medical care, and inadequate patient education, screening, and outreach. Community organizations, local health care providers, and the New York City DOHMH must work together to increase Central Brooklyn's vaccination rates and eliminate health disparities.

### Community organizations, with the support of residents, should:

#### Prepare for the flu season

- Sponsor a NYC DOHMH influenza vaccination clinic or identify existing local clinics.\*  
Increase turnout through promotion, organizing pre-events, and facilitating transportation.

#### Promote the vaccine

- Provide and discuss educational materials about the vaccine with community members.\*  
Separate myth from fact, and provide an opportunity for recently vaccinated people to share their experience.
- Encourage all staff to get vaccinated – set an example for other community members.
- Provide reminders to members to get a flu shot, put up posters in prominent locations, and advertise local NYC DOHMH vaccination clinics\* in bulletins and newsletters.
- Collaborate with other groups, including faith-based organizations and local health care providers, in promotional and educational efforts.

#### Monitor progress

- Set goals and track the proportion of organization members who receive a shot during the flu season. Aim to improve this proportion each year.

### Health care providers should:

#### Prepare for the flu season

- Make sure all staff – providers and support staff alike – gets vaccinated early in the season.  
Set an example for patients.
- Implement reminder systems for your practice – flag the charts of high-risk patients by using pre-printed chart stickers or electronic reminders.
- Implement patient reminder systems such as by mailing “get your flu shot” postcards.
- Modify office procedures so all patients are asked about needing a flu shot, for example, when vital signs are taken. Use standing orders (in large facilities) to ensure that patients receive the vaccine.\*
- Expand access by offering extended hours or express-lane vaccination services.

#### Promote the vaccine

- Recommend the vaccination to patients. Flu vaccine is lifesaving – offer vaccination as you would other critical treatments. Address mistrust and skepticism.
- Provide and discuss educational materials about the vaccine with your patients, staff and if possible, community groups.\*
- Have patients or staff who refuse the flu vaccine sign a “Refused to Receive Vaccination” form to impress upon them the importance of influenza vaccine.\*

#### Monitor progress

- Monitor how many flu vaccinations are provided and determine the proportion of eligible patients that receive the vaccine. Aim to improve this proportion each year.

\*Resources are available at [nyc.gov/health/flu](http://nyc.gov/health/flu)

A Neighborhood Report from the

# Brooklyn District Public Health Office

New York City Department of Health and Mental Hygiene

Fall 2006

## Resources

### New York City Department of Health and Mental Hygiene

Visit [nyc.gov/health/flu](http://nyc.gov/health/flu) for:

- Where to get free or low-cost flu shots (or call 311)
- *Health Bulletin #44: Time to Get a Flu Shot!* (or call 311)
- *City Health Information: Influenza: Prevention and Control, 2006-2007*
- *Influenza and Pneumococcal Resource Guide*
- More information about influenza

Health care providers may also call 866-NYC-DOH1 (866-692-3641)

### New York State Department of Health

[www.health.state.ny.us/diseases/communicable/influenza](http://www.health.state.ny.us/diseases/communicable/influenza)

### U.S. Centers for Disease Control and Prevention

[www.cdc.gov/flu](http://www.cdc.gov/flu)

### Immunization Action Coalition

[www.immunize.org](http://www.immunize.org)

### National Foundation for Infectious Diseases

[www.nfid.org](http://www.nfid.org)

### National Network for Immunization Information

[www.immunizationinfo.org](http://www.immunizationinfo.org)

### American Society of Consultant Pharmacists' 100% Immunization Campaign

[www.immunizeseniors.org](http://www.immunizeseniors.org)

## Neighborhood Reports

To help reduce health disparities and improve the health of all New Yorkers, the New York City Department of Health and Mental Hygiene established District Public Health Offices (DPHOs) in 2003. DPHOs target public health efforts and resources to New York City neighborhoods with the highest rates of illness and premature death: North and Central Brooklyn, the South Bronx, and East and Central Harlem.

An important part of our work is collecting and interpreting neighborhood health data. We hope this report fosters dialogue and collaboration among our many partners—other city agencies, community-based organizations, hospitals and clinics, businesses, and, most important, the New Yorkers who live and work in Central Brooklyn.

For more information on the District Public Health Offices, visit: [nyc.gov/health/dpho](http://nyc.gov/health/dpho)