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**Hofstra-North Shore LIJ Family Medicine Residency Programs at Glen Cove Hospital & Southside Hospital - Long Island, NY**

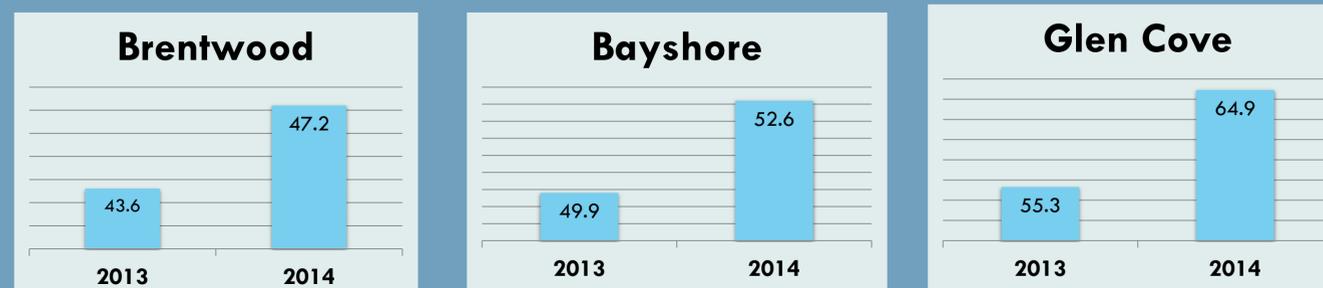
### Objectives

The Hofstra North Shore LIJ (NSLIJ) School of Medicine's Department of Family Medicine has three residency programs of which two – Glen Cove Hospital FMRP (Glen Cove NY) and Southside Hospital FMRP (Bay Shore NY) joined efforts to improve vaccination rates amongst Long Island seniors. Our main objective in this project was to provide better care to our elderly via immunization for influenza and pneumonia as well as to educate this population about the importance of all required immunizations for their age group. We aimed to serve a minimum of 1,200 seniors through our hospital and community based approach in order to increase the vaccination rate among seniors within our community by at least 25 percent.

### Program

- We utilized the NSLIJ Healthcare System Mobile Van to provide free immunizations and education about the required vaccine series for seniors.
- Our two residency programs worked both collaboratively and separately through the months of October 2014 and February 2015 at senior centers, churches, community centers, street fairs, holiday events and health fairs .

### Results

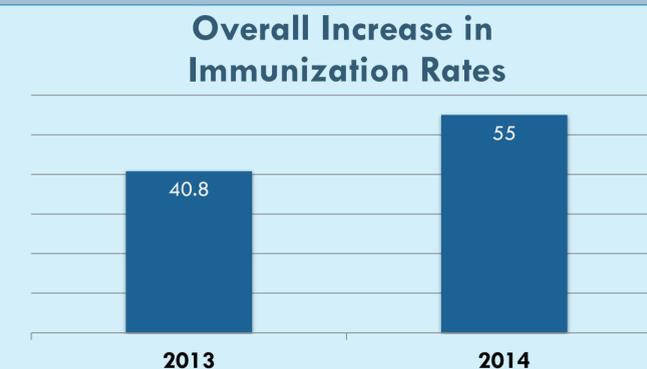


The communities served by the residency programs were Brentwood & Bay Shore (Southside Hospital FMRP) and Glen Cove (Glen Cove Hospital FMRP) both with yellow arrows on the map. Brentwood immunization rates increased from 43.6% to 47.2% between 2013 and 2014 flu seasons. Bay Shore immunization rates increased from 49.9% to 52.6%. Glen Cove immunization rates saw the greatest improvement, from 55.3% to 64.9% between 2013 and 2014 flu seasons. Our total immunization rate across the 3 areas improved to 55% for the 2014-2015 flu season from 40.8% in the previous season, an improvement of nearly 35 percent. Overall, we provided 7,506 influenza immunizations and 1,904 pneumococcal immunizations to seniors within our 3 areas.

*Support for the Senior Immunization Grant Award was made possible by the AAFP Foundation, through a grant from the Anthem Foundation.*

### Conclusions

Our multipronged hospital and community based approach allowed us to achieve our primary goal of providing influenza and pneumococcal vaccinations to at minimum 1,200 seniors and improve local immunization rates by nearly 35 percent. Our use of a mobile health van enabled us to target seniors that may be at increased risk of missing immunizations including members of racial/ethnic minorities, disadvantaged backgrounds, and those without access to preventive healthcare.



### References

- Centers for Disease Control and Prevention. Flu Vax View. Atlanta, GA. Available at <http://www.cdc.gov/flu/fluview/>. Accessed May 19, 2015.
- U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Available at <http://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases>. Accessed May 19, 2015.



## 2014-15 Senior Immunization Grant Awards FINAL REPORT FORM for RESULTS & FINDINGS

### Instructions

- The information requested, including Appendix 1-3, should be included in your Final Report.
- Your Final Report is due by May 1, 2015.
- Please include any attachments, graphs, pictures (jpg, if possible) or other items that capture the essence of the outcomes realized by your project.

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**Name of Family Medicine Residency Program: North Shore-LIJ Health System Southside and Glen Cove Family Medicine Residency Programs**

### Contact Information

1. Name, Title, Email of person completing the report: **Marlene Camacho-Rivera, Epidemiologist, mcamacho2@nshs.edu**
2. Project Contact information if different from above:
3. Name(s) of Resident(s) presenting Immunization Awards Poster at the 2015 National Conference: **Kevin Reiter, Glen Cove Family Medicine Residency Program and Keasha Guerrier, Southside Family Medicine Residency Program**

**Title of Project:** *Vaccinating on the Go: Utilizing a Mobile Health Van to Increase Vaccination Rates among Long Island Seniors.*

### Statement of Goal(s) Include your Primary Metrics

Our primary goal was to provide at minimum 1,200 influenza and pneumococcal immunizations among seniors within the Bay Shore, Glen Cove, and Brentwood areas in order to get closer to national goals. We tracked our progress of this goal by 1) Assessing the immunization rates for Influenza and Pneumococcal Vaccinations within our 3 sites and comparing these to state and national immunization rates; 2) Developing an educational intervention targeting family medicine residents and clinical staff regarding the importance of immunizations and community challenges; 3) Identifying areas (e.g. churches, senior centers, community centers, etc.) within these communities that are most accessible and recognizable to seniors; and 4) Determining community immunization rates after educational intervention and targeted outreach. A secondary goal was to increase immunization rates within these neighborhoods by at minimum 25% based on our 2013-2014 baseline data among the 13,064 seniors within the 3 areas.

With respect to resident education, our primary goal was to have at minimum 10 residents from the Southside Family Medicine Residency Program and 5 residents from the Glen Cove Family Medicine Residency Program participate on the Mobile Health Van.

## **Impact on Target Population**

1. **PATIENT DATA** – Complete information in Appendix 1.

2. **KEY OUTCOMES** (Bullet points)

- To increase awareness among family medicine residents of the importance of vaccinations among seniors.
- To increase awareness among local seniors of the importance of influenza and pneumococcal vaccinations.
- To increase the number of influenza vaccinations among Bay Shore, Brentwood and Glen Cove seniors by at least 25%.
- To provide influenza or pneumococcal vaccinations to at minimum 1,200 seniors within the Bay Shore, Brentwood, and Glen Cove areas.

3. **KEY PROGRAM COMPONENTS**

- Educational materials were given to residents based on relevant AAFP content on Preventive Care. Materials were presented during Ground Rounds and were available within our family health centers.
- Our residency programs worked with Ambulatory Services to contract a Mobile Health Van which provided day and evening hours in 4 hour blocks, primarily during the weekends. The Mobile Health Van alternated between Bay Shore and Glen Cove sites and was dispatched to local community events such as health fairs, senior centers, and after religious services.
- Immunization materials distributed to senior centers, community health centers, churches, and hospitals to educate about the importance of vaccinations. Education materials were based on existing materials developed by the CDC and were available in English and Spanish. These materials were also distributed on the Mobile Health Van.
- NSLIJHS also has its own influenza immunization campaign that it hosts during flu season which includes education displays and handouts in main lobby areas and electronic banners that are run on television screens in certain public areas. While this effort was coordinated independently from our initiative, we chose to include this as a key program component because seniors who receive care within NSLIJHS facilities likely came across this campaign as well.

4. **THINGS THAT WORKED BEST (to accomplish your activities)**

- Collaboration – The importance of early collaboration cannot be stressed enough as it was crucial to the implementation of the mobile van.
  - Our ability to build partnerships with local churches and community centers relied heavily on our collaboration with our Community Relations Department within NSLIHS. Our Community Relations Department assisted our residency programs in communicating with

the Town Board of Islip (which includes our Bay Shore and Brentwood sites) to approve the resolution to be able to distribute vaccinations. Our Community Relations Department also reached out to local churches and senior centers to identify community facilities that had the greatest need for our services; this enabled us to target specific groups that may be routinely missed by our hospitals and clinics.

- The collaboration of the NSLIHS Planning Office was essential for us to be able to accurately monitor the progress of our immunization initiatives across the health system. The Planning Office was responsible for providing us with community demographics data for Southside and Glen Cove Hospitals, as well as the baseline immunization data among senior patients. While our residents and epidemiologist tracked the vaccinations distributed by our Mobile Health Van, the Planning Office provided us with the data for seniors who received vaccinations from our community providers within the Bay Shore, Brentwood and Glen Cove geographic areas. As NSLIJHS is one of the largest integrated health systems in the country, the volume of data we received was considerable, assistance from the analysts at the Planning Office was crucial for us to be able to track the success of our program in real time.
- Communication – Constant and detailed communication was essential to be able to effectively coordinate this initiative across two Family Medicine Residency Programs, as well as additional NSLIJHS departments (e.g. Community Relations Department and Planning Office). We provided weekly updates regarding the status of the project during our internal departmental meeting and corresponded via email for several days prior to each event. Lead residents were chosen early on based on interest and were responsible for providing updates to the epidemiologist and site directors during the program and prior to submission of interim and final reports. Event summaries were also distributed via email to all members involved in the project, which allowed us to gage our progress in real time, as well as what worked and what could be improved upon in future outings.
- Commitment – The implementation of this program required a significant commitment from our department, especially our residents who were responsible for overseeing the project, staffing the mobile van, and developing many of our educational tools and deliverables. Identifying residents that were interested in taking leadership of the project was crucial in increasing resident participation and resident education. We believe that the commitment of our residents and staff enabled our program to be successful in reaching our primary and secondary goals, in spite of the numerous challenges we faced during the delivery of our program.

## 5. LESSONS LEARNED

While we achieved our goals of providing a minimum of 1,200 vaccinations to seniors across our sites and improved the immunization rate by more than 25%, our initiative did not come without its

challenges. Below we've detailed some of the lessons learned in carrying out an initiative of this magnitude:

- The importance of community outreach: We experienced some attendance issues early during the month of November, where only 16 vaccinations were provided for seniors across 2 events. We believe these events were not well attended because of a lack of outreach on our part which resulted in a lack of awareness among community members. We believe this is accurate as the events were well attended by community members less than age 65, but not seniors.
  - *Lesson Learned*: In order to remedy this issue, we secured additional partnerships with local churches and senior centers to increase our participation rates in later months. We also provided educational materials to all seniors and individuals who attended our events.
- The importance of community stakeholders: We experienced significant obstacles in being able to provide vaccinations on our Mobile Health Van within the Bay Shore and Brentwood areas due to legal and political challenges in working with the Town of Islip. It took our team several months to have our resolution to provide immunizations within senior centers approved by the Deputy Commissioner and Town Board. While we were able to host several events in the early months of our program, by November we were unable to continue hosting immunization events due to the inability of Southside Hospital to reach a legal agreement with the Town of Islip. As a result, our remaining Mobile Health Van events were in Glen Cove and we were unable to continue outreach within Bay Shore and Brentwood, the areas with the largest proportion of disadvantaged areas and seniors.
  - *Lesson Learned*: In the future, we would recommend engaging community stakeholders within our target sites in the application process, to increase community buy-in. This would also enable us ample time to be able to negotiate legal contracts and logistics to ensure that our program could begin in a timely manner.
- The importance of preparation: To coordinate an initiative of this scale required a tremendous amount of preparation on the part of the residents, support staff, and collaborating departments. In the beginning, our residents and staff were a bit overwhelmed with the logistics of coordinating the Mobile Health Van, which provided some unnecessary stress and work on already overburdened residents. We also experienced significant delays in the submission of our final report due to delays and errors with the data acquisition from the Planning Office.
  - *Lesson Learned*: To remedy this issue, we streamlined the data collection process for the grant in order to reduce the burden on the residents staffing the van. We also provided a checklist of materials to ensure that the van was adequately staffed and maintained a

running count of the number of vaccinations remaining after each event. With respect to the data acquisition, although the request for the final data to the planning office was sent several months in advance, there were certain errors and delays that were beyond our control. Fortunately, we were able to maintain our own database for our community outreach component and communicated with the AAFP Foundation regularly regarding delays with our report submission.

- The importance of resident engagement: As our residents already have busy schedules, initially it was difficult to recruit residents to staff the Mobile Health Van on weekends. After all, the program was voluntary and it was difficult for residents to coordinate fitting another project into their existing service and research obligations.
  - *Lesson Learned*: To improve resident participation in the program, we recruited two outstanding residents to serve as leads for each of our project sites. The residents were responsible for encouraging other residents to participate in community events, as well as data collection, and preparation of final reports and abstract/poster. Once our residents took ownership of the project, we had more residents interested in volunteering in the program and were able to reach our secondary goals of resident participation. In turn, our residents were able to gain valuable experiences in teamwork, interdisciplinary collaboration, and working within disadvantaged communities.
- The importance of family: Although we had issues with attendance among seniors, we experienced an overwhelming number of adults less than 65 years attend our Mobile Health Van events. We recognized early on that we had an obligation to provide immunizations to these individuals, although they were not part of our target population and were not included in our overall metrics. We reached out to administration at Southside Hospital who generously matched our immunizations to be able to provide free vaccinations to younger adults.
  - *Lesson Learned*: Although our initial intent was to focus solely on seniors, we recognized that in order to be able to reach seniors, we had to include all members of the community. As an increasing number of seniors are choosing to live at home with family members, providing vaccinations to younger adults may be an additional way to encourage vaccinations among seniors by encouraging a family centered approach to vaccinations.

## **6. PERSONAL STORY** (*Provided by Kevin Reiter, Lead Resident for Glen Cove site*)

It was a sunny Fall Saturday afternoon as I arrived from a weekend shift in the clinic to our first site for mobile vaccination at the La Fuerza Unida street fair. I was greeted by our hospital's PharmD Jen, many nurses, resident physicians, and attending physician volunteers from both the NSLIJ-

Southside Hospital and Glen Cove Hospital family medicine residency programs as well as our community outreach coordinator Patrick Mack. Patrick was instrumental in helping us to secure time and space at many community events throughout the Fall and Winter, and without his guidance and connections in the community this project would never have taken off.

The Glen Cove community has a very vibrant and diverse Hispanic population composed mainly of those of South and Central American descent and this event has become an annual tradition. It serves as a time to represent and display all the different cultures through food, dance and fun - all things that helps to make the neighborhood so unique. The team had been vaccinating many visitors to the fair either on their way in or upon leaving the event. I was happy to see such a great turnout on both the patient and provider side of the tables. The mobile van served as a constant temporary office for seniors and I quickly jumped into action. My first few seniors were either transient inhabitants of the United States or recent immigrants who had not yet established a medical home and came from near and far to attend the event. Many had not seen any primary care providers in over a year and I was able to discuss our family practice center at the nearby Glen Cove Hospital with many of them. Many of the families who attended were with three generations and we were able to vaccinate grandparents, parents and their children and also provide valuable information about other vaccines not offered on that particular day.

This event in particular reminded me why I chose family medicine. I was able to work with an outstanding group of medical professionals (all of whom volunteered) and many whom never knew each other before this day. We all worked as a team with a common goal of educating and vaccinating. If you were an outside observer you might think we had been doing this for years together instead of only a few hours. The day flowed so smoothly and at the end of the day we all took great pride in the work we had accomplished as a team. Many volunteers came with me to similar successful community events that followed, but I still remember that day and the name of that fair. The English translation of la Fuerza Unida is "The United Force" and I couldn't think of a better way to describe my family medicine team that day.

## 7. IMPACT OF INTERVENTIONS - Complete information in [Appendix 2](#).

### **Impact on Residents and Team Members**

1. Provide a general description of those who worked on the quality-improvement and/or community-based project (e.g., 18 residents, 3 medical students, and 2 MPH graduate students).
  - 20 residents across the Southside and Glen Cove Family Medicine Residency Programs (10 each site) who worked on the Mobile Health Van.
  - 2 nurses who assisted with staffing the community events.
  - 2 pharmacists who assisted in the storing and dissemination of vaccinations.

- 2 lead faculty members who assisted with coordinating community events and overseeing residents while on the mobile health van.
  - 2 project managers who were responsible for coordinating the delivery of community data as well as providing specific deliverables for interim and final reports. Project managers also hosted educational events for hosting immunization grand rounds for residents.
  - 2 community liaisons who were responsible for identifying and reaching out to local senior centers, churches, and other venues to host immunization efforts.
  - 1 epidemiologist who monitored residents' data collection efforts, collaborated with the Planning Office on providing immunization statistics, and oversaw the compilation of reports.
  - 1 administrative director who was responsible for monitoring grant funds including purchasing of supplies, contracting of the Mobile Health Van, and securing travel for residents to AAFP conference.
2. Address the current and future impacts of this project on the residents &/or members of the team.

By participating in this project, our residents have been able to gain valuable experiences in providing primary healthcare to disadvantaged communities, which will improve the care they are able to provide as family physicians. As many of our residents are from outside of New York, the project has provided them the opportunity to directly work with underserved areas within Long Island, highlighting the disparities that exist even within a seemingly affluent area.

Additionally, our residents have gained skills in research methodology and quality improvement, particularly in the areas of data collection and dissemination. Many residents have expressed interest in participating in additional volunteer events in the future and we have sought additional funding to continue supporting our community based efforts. Our FMRP have gained valuable partnerships with community organizations that we hope to sustain in the future. Furthermore, our FMRP have been given insight into additional health concerns that our communities are facing, which we hope to address through future initiatives.

3. If applicable, describe the impact (on your project) of the new ACIP pneumococcal recommendation issued on September 19, 2014 (Both PCV13 and PPSV23 should be administered routinely in series to all adults aged  $\geq 65$  years. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6337a4.htm#box>)  
*Not applicable*

## Education and Outreach

1. Summary of accomplishments
  - Established the following Community Partnerships:
    - a. La Fuerza Unida Street Fair in Glen Cove, NY
    - b. Saint Patrick's Roman Catholic Church in Bay Shore, NY

- c. Saint Paul's Garden in Brentwood, NY
  - d. Tanner Park Senior Center in Copiague, NY
  - e. Bishop McGann Village in Central Islip, NY
  - f. Saint Anne's Gardens Brentwood, NY
  - g. First Baptist Church in Bay Shore
  - h. First Baptist Church in Bay Shore, NY
  - i. TOI West Islip Center, West Islip, NY
  - j. TOI East Islip Center, East Islip, NY
- Improved resident involvement in community outreach and research activities:
    - a. 20 residents across 2 program sites participated in the Mobile Health Van community events.
    - b. 2 residents served as leads on the implementation and monitoring of the project.
  - Improved senior vaccination rates across Bay Shore, Brentwood, and Glen Cove communities:
    - a. Bay Shore immunization rates increased from 49.9% to 52.6% between 2013 and 2014 flu seasons.
    - b. Brentwood immunization rates increased from 43.6% to 47.2% between 2013 and 2014 flu seasons.
    - c. Glen Cove immunization rates saw the greatest improvement, from 55.3% to 64.9% between 2013 and 2014 flu seasons.
    - d. Our total immunization rate across the 3 areas improved to 55% for the 2014-2015 flu season from 40.8% in the previous season, an improvement of nearly 35 percent.
    - e. Overall, we provided 7,506 influenza immunizations and 1,904 pneumococcal immunizations to seniors within our 3 areas.
2. List of clinical & patient education and outreach materials produced or used in this project.
    - Senior Immunization Consent Form
    - Senior Immunization Medical History Form
  3. List of presentations with the date(s) and brief description of the audience.
    - New York State Academy of Family Physicians Winter Weekend and Scientific Assembly Student Session Panel – January 25, 2015. Overview of the Vaccinating on the Go and Interim Progress Report.
  4. Include the materials developed and implemented as an attachment (in a jpg or pdf format) or provide the web address where they can be accessed.  
 Immunization Consent Form and Medical History Form are attached.  
 Immunization educational materials can be accessed at:  
<http://www.cdc.gov/vaccines/adults/resources.html>

## **Sustainability**

Discuss how the FMRP and residents will carry the best practices and gains into the future.

Our FMRP and residents plan to carry best practices into the future by taking the following steps:

- Conducting a grand rounds or seminar every September for residents regarding the importance of immunizations among seniors and best practices regarding the current immunization recommendations.
- Continuing our community relationships to identify potential opportunities for collaboration at community health fairs or other special events.
- Encouraging our residents to continue to volunteer at community events and for additional service opportunities.
- Monitoring immunizations among seniors within our family medicine practices to identify groups that may need targeted services.
- Identifying additional grant opportunities to provide immunizations through community based efforts.

## **Project Impact Statement for Donors**

What would you like the donors who supported this project to know about this project and the benefit you derived from receiving this grant?

We would like to sincerely thank the donors who supported this project for providing us the opportunity to undertake an initiative of this magnitude. This is the first opportunity that our family medicine residents have had the opportunity to collaborate on a project. Over the past year we have seen our residents grow in their leadership experience and gain comfort and competency in providing healthcare within underserved communities. In particular, our lead residents have taken a great sense of pride and ownership in the project and are excited to participate in future initiatives.

As a large health system, it is easy for our residents and departments to feel compartmentalized and segmented from each other. However, through this project our residents have seen the ability of individuals from different departments and backgrounds to come together and work towards a common goal. They have also seen the success that comes from interdisciplinary education and collaboration, as it would have been difficult for any single entity to achieve the results that we achieved due to time and financial constraints without donor support. Throughout their training, our residents have heard many family medicine practitioners speak of putting patients first, getting out into the community, and reaching across disciplines for the benefit of the patient. With this grant, they've been given the opportunity to experience this first hand and will carry these memories with them to make them better family medicine physicians.

## Appendix 1: PATIENT DATA for 2014-15 Senior Immunization Grant Award

### I. INFLUENZA VACCINE INFORMATION: 2014-15 Flu Season

- 1a. Total # of seniors (adults aged ≥65) served by your residency who were **eligible** for an *influenza* vaccine from 9/1/14 -3/31/15: 13064
- 1b. Total # of seniors who **received** an *influenza vaccine* from 9/1/14 - 3/31/15: [Click here to enter text.](#)
- 1c. Historical Data – Enter data in the table by clicking on the box and typing in the numbers

Seniors Serviced through Bay Shore NSLIJHS Providers:

Seniors (age 65 and older)	2012-2013 Flu Season (Sep 2012-Mar 2013)	2013-2014 Flu Season (Sep 2013-Mar 2014)	2014-2015 Flu Season (Sep 2014-Mar 2015)
Influenza Vaccine Rate (%)	<b>50.6%</b>	<b>49.9%</b>	<b>52.6%</b>
Numerator/Denominator (absolute numbers used to calculate rate)	1665/3290	1571/3148	1656/3148

Seniors Serviced through Brentwood NSLIJHS Providers:

Seniors (age 65 and older)	2012-2013 Flu Season (Sep 2012-Mar 2013)	2013-2014 Flu Season (Sep 2013-Mar 2014)	2014-2015 Flu Season (Sep 2014-Mar 2015)
Influenza Vaccine Rate (%)	<b>44.1%</b>	<b>43.6%</b>	<b>47.2%</b>
Numerator/Denominator (absolute numbers used to calculate rate)	2087/4732	1107/5129	2421/5129

Seniors Serviced through Glen Cove NSLIJHS Providers:

Seniors (age 65 and older)	2012-2013 Flu Season (Sep 2012-Mar 2013)	2013-2014 Flu Season (Sep 2013-Mar 2014)	2014-2015 Flu Season (Sep 2014-Mar 2015)
Influenza Vaccine Rate (%)	<b>43.4%</b>	<b>55.3%</b>	<b>64.9%</b>
Numerator/Denominator (absolute numbers used to calculate rate)	2032/4683	2647/4787	3107/4787

- 1d. Summary of methodology used to obtain the data and information:  
 For Southside, we used billing records for all patients age 65 and older who visited any NSLIHS doctor's office within the Bay Shore area (based on 11706 zip code) for each fiscal year were included in the calculation. For each year, the numerator was calculated as the number of all patients age 65 and older who received influenza vaccinations. The denominator is the number of seniors living within Bay Shore based on the American Community Survey. For the 2012-2013 flu season, the 2012 estimate was used for the denominator and for the 2013-2014 and 2014-2015 flu season, the 2013 estimate was used as this is the most recent year the data are available.  
 For Brentwood, we used billing records for all patients age 65 and older who visited any NSLIHS doctor's office within the Brentwood area (based on 11717 zip code) for each fiscal year were included in the calculation. For each year, the numerator was calculated as the number of all patients age 65 and older who received influenza vaccinations. The denominator is the number of seniors living within Brentwood based on the American Community Survey. For the 2012-2013 flu season,

the 2012 estimate was used for the denominator and for the 2013-2014 and 2014-2015 flu season, the 2013 estimate was used as this is the most recent year the data are available.

For Glen Cove, we used medical billing records for all patients age 65 and older who visited any NSLIJHS doctor’s office (including our Family Medicine Practice) from September 1st through March 31st of the fiscal year were included in calculating rates below. For each year, the numerator was calculated as the number of all patients age 65 and older who received influenza vaccinations. The denominator is the number of seniors living within Glen Cove based on the American Community Survey. For the 2012-2013 flu season, the 2012 estimate was used for the denominator and for the 2013-2014 and 2014-2015 flu season, the 2013 estimate was used as this is the most recent year the data are available.

**II. PNEUMOCOCCAL VACCINE INFORMATION: 2014-15 Flu Season**

\*Note: New ACIP recommendations for PCV13 and PPSV23 use in adults aged ≥65 were issued on Sep 19, 2014 during the course of this grant. They were NOT required to be implemented by grant recipients.

2a. Total # of seniors who were **eligible** for a PPSV23 vaccine who were served by your residency from 9/1/14 - 3/31/15: We  
 were unable to provide precise estimates of the number of seniors who were eligible for pneumococcal vaccinations, as this information is often missing from medical records among seniors. Based on the 2013 data, 65.1% of seniors had ever received a pneumococcal vaccination in their lifetime. As such, 34.9% of seniors (approximately 4560) within our 3 areas were eligible to receive a vaccination.

2b. Total # of seniors who **received** a PPSV23 vaccine from 9/1/14 – 3/31/15: 1,774 seniors within Bay Shore, Glen Cove, and Brentwood received pneumococcal vaccinations within the 2014-2015 season.

2c. Historical Data – Enter data in the table by clicking on the box and typing in the numbers

Seniors (age 65 and older)	2012-2013 Flu Season (Sep 2012-Mar 2013)	2013-2014 Flu Season (Sep 2013-Mar 2014)	2014-2015 Flu Season (Sep 2014-Mar 2015)
PPSV23 Pneumococcal Vaccine Rate (%)	56.9%*	65.1%*	<b>38.9%</b>
PPSV23 Numerator/Denominator (numbers used to calculate rate)			1774/4560
*Number of seniors who received PCV13 during specific time period			

2d. Summary of methodology used to obtain the data and information:  
 For 2012-2013 and 2013-2014, pneumococcal vaccination rates were provided directly to use by our Planning Office; as such we do not have the raw data available to assess the numbers used to calculate the rate. The vaccination rates presented for 2012 and 2013 are based on the percentage of seniors who have reported ever received a vaccination, not the percentage that received a vaccination within that year.

For 2014-2015, we used medical billing records for all patients age 65 and older who visited any NSLIJHS doctor’s office within Bay Shore, Glen Cove, and Brentwood from September 1st through

March 31st of the fiscal year. For the 2014-2015 season, the numerator was calculated as the number of all patients age 65 and older who received a pneumococcal vaccination; the denominator was the number of seniors who had never received a pneumococcal vaccination.

**III. COMMUNITY-BASED PROJECTS ONLY: INFLUENZA & PNEUMOCOCCAL INFORMATION: 2014-15 influenza season** [\*Note: New ACIP recommendations for PCV13 and PPSV23 use in adults aged ≥65 were issued on Sep 19, 2014 during the course of this grant. They were NOT required to be implemented by grant recipients]

- 3a. Total # of seniors served by this project through community outreach from 9/1/14 – 3/31/15: 314 seniors were served through the Mobile Health Van and 111 were served through the Brentwood Family Health Center.
- 3b. Total # of seniors served through community outreach who **received an influenza** vaccine from 9/1/14– 3/31/15: 322 seniors received an influenza vaccine on the Mobile Health Van or at the Brentwood Family Health Center  
Is this data included in the data presented in question 1b and 1c? No, these data are not included in the previous section
- 3c. Total # of seniors served through community outreach who **received a PPSV23 vaccine** from 9/1/14-3/31/15: 130 seniors received a pneumococcal vaccine on the Mobile Health Van or at the Brentwood Family Health Center Is this data included in the data presented in question 2b and 2c? No, these data are not included in the previous section
- 3d. Total # of seniors who **received a PCV13 vaccine\*** from 9/1/14 – 3/31/15: [Click here to enter text](#). Is this data included in data presented in 2c? [Click here to enter text](#).
- 3e. Summary of methodology used to obtain the data and information:  
Sign in sheets at each Mobile Health Van event and at the Brentwood Family Health Center were provided. Along with date of birth, sex, race/ethnicity, insurance status, and whether they received influenza, pneumococcal, and immunization education information were collected.

**IV. PNEUMONIA-RELATED HOSPITALIZATION RATES FOR AGE ≥ 65, Reported Over 2 Flu Seasons**

- 4a. Historical Data – Enter data in the table by clicking on the box and typing in the numbers

PNEUMONIA-RELATED HOSPITALIZATION RATES FOR SENIORS AGE ≥ 65		
Patients 65 and older	2013-2014 Flu Season (Sep 2013-Mar 2014)	2014-2015 Flu Season (Sep 2014-Mar 2015)
Community Acquired Pneumonia	Not available	Not available
Pneumococcal Pneumonia	1	2
Influenza-Related Pneumonia	10	14

Hospital	Principle Diagnosis	Diagnosis Code	Case Count 2013-2014	Case Count 2014-2015
Southside	Bronchopneumonia Organism NOS	485	2	1
Southside	Influenza with pneumonia	487.0	10	14
Southside	K. pneumoniae pneumonia	482.0	1	0
Southside	Pneumococcal pneumonia	481	1	2
Southside	Pneumonia, organism NOS	486	197	184
Southside	Pseudomonal pneumonia	482.1	3	1

- 4b. Summary of methodology used to obtain the data and information:

There were a total of 214 pneumonia-related hospitalizations for seniors age 65 and above during the 2013-2014 flu season for Southside Hospital. However, we are unable to distinguish which of these cases are community acquired pneumonia due to the fact that our data were collected via billing records, where this information is not reported. We were able to identify 1 pneumococcal pneumonia and 10 influenza-related pneumonias, based on the principal diagnosis code entered during billing. There were 202 pneumonia-related hospitalizations for seniors age 65 above during the 2014-2015 season, of which 2 were pneumococcal pneumonia and 14 were influenza-related. Once again, we were unable to distinguish which pneumonia hospitalizations were community-acquired versus hospital-acquired. We were unable to obtain pneumonia-related hospitalizations for Glen Cove Hospital; Southside Hospital is the main hospital that serves the geographic areas of both Bay Shore and Brentwood.