

# **Cape May County Influenza Vaccination Activities 2011-2012**

## **Program Summary**

There were no supply issues with influenza vaccine in 2011-12. It was an unusual season in that the composition of the vaccine contained the same three strains as the previous year, raising questions among some about the need for vaccination. Public measures included information about the waning effects of the flu vaccine, and the need for yearly re-vaccination. The 2011-12 flu season was one of the latest and mildest on record, with peak activity seen in March 2012. It was also an unusually mild winter, which may have contributed to the mild influenza season, since the virus is more easily transmitted in colder weather.

The County ordered a total of 6,080 doses of seasonal flu vaccine for 2011-2012. The first flu vaccine shipment was received on August 11, 2011 and all vaccine was received by September 27, 2011, which was before the scheduled drive-through clinic. The Department of Health continued its second year with the VaxCare program, where the Department administered vaccine to patients with Medicare Part B or other selected insurances on behalf of VaxCare, earning an administration fee for each vaccine given and successfully billed. Through participating in the VaxCare program, the Department was able to offer seniors the FluZone high-dose vaccine.

The Department of Health organized one mass vaccination drive-through clinic on October 23, 2011. Efforts were made to increase the number of children vaccinated and four clinics were held specifically targeting children and families, one at the Health Department, two at elementary schools, and one at a church. Six special senior clinics were held for seniors and included the High-Dose vaccine. Senior clinics were held at the Health Department and at area senior centers. At the end of the influenza season, a total of 5,442 influenza vaccinations had been given to County residents, representing all 16 municipalities, with 4,882 vaccinations provided directly by the Department of Health.

In 2010-11, the Advisory Committee on Immunization Practices (ACIP) recommended universal influenza vaccination for all persons 6 months of age and older. In 2011-12, 75% of vaccines were given to ACIP "high-priority" groups. Sixty-four percent of persons vaccinated this season were 50 years of age or older. Three percent of the total was less than 5 years of age, representing the target population for New Jersey's daycare/preschool immunization mandate.

Eighty-seven percent of vaccine recipients identified themselves as White and 3% as Black. Eight percent identified themselves as Hispanic or Latino (up from 4%) and 57% as female. The percentage of Black residents who were vaccinated remains lower than population percentages. The majority of vaccine recipients were from Middle Township, Lower Township, Wildwood, and Cape May City. Vaccination rates (# persons vaccinated per 100 population) were highest in Cape May, Stone Harbor, Woodbine, Avalon, and Wildwood. The clinics held in Wildwood and Woodbine contributed to the increased representation in these areas.

Fifty-five percent of persons vaccinated by the Department of Health received their vaccine at the drive-through clinic. An additional 38% were vaccinated at other scheduled clinics and 7% were vaccinated during non-clinic times.

Apart from the County Department of Health's vaccination activities, a number of residents received the influenza vaccine this season from local hospitals, physicians, pharmacies, and supermarket clinics. Cape Regional Medical Center vaccinated 641 staff and volunteers in addition to 405 eligible patients, for a total of 1,046 influenza vaccinations administered this season.

Eighty-one percent of those vaccinated this year by the County Department of Health were also vaccinated last year. Sixty-nine percent of those receiving the flu vaccine last year received it from the County, with 47% receiving their vaccine at the drive-through clinic. The high percentage of repeat clients demonstrates a high level of satisfaction with County flu clinics.

Additional information is available in the following appendices:

- Appendix A: Vaccination data for County Employees
- Appendix B: Program Management Recommendations

## Program Overview

There were no supply issues with influenza vaccine in 2011-12. It was an unusual season in that the composition of the vaccine contained the same three strains as the previous year, raising questions among some about the need for vaccination. Public messages included information about the waning effects of the flu vaccine, and the need for yearly re-vaccination. The 2011-12 flu season was one of the latest and mildest on record, with peak activity seen in March 2012. It was also an unusually mild winter, which may have contributed to the mild influenza season, since the virus is more easily transmitted in colder weather.

The County ordered a total of 6,080 doses of seasonal flu vaccine for 2011-2012.

Type of Vaccine	Manufacturer	County Order	VaxCare	VFC	TOTAL
FluMist	Medimmune	200			200
FluZone High-Dose	Sanofi-Pasteur		400		400
FluZone Intradermal	Sanofi-Pasteur	10			10
FluZone Multidose Vial	Sanofi-Pasteur	4350			4350
FluZone Pediatric	Sanofi-Pasteur			10	10
FluZone Pre-Filled Syringe	Sanofi-Pasteur	350			350
FluZone Single Dose Vial	Sanofi-Pasteur	740		20	760
<b>TOTAL</b>		<b>5650</b>	<b>400</b>	<b>30</b>	<b>6,080</b>

The first flu vaccine shipment was received on August 11, 2011 and all vaccine was received by September 27, 2011, which was before the scheduled drive-through clinic. The Department of Health entered into a second year with the VaxCare program, where the Department administered vaccine to patients with Medicare Part B or other selected insurances on behalf of VaxCare, earning a \$7.50 administration fee for each vaccine given and successfully billed. Through participating in the VaxCare program, the Department was able to offer seniors the FluZone high-dose vaccine. Out of the 400 doses ordered through VaxCare, 205 doses were administered, with the remainder returned to VaxCare at the end of the season. The County earned \$1,290 in administration fees from VaxCare.

The County participated with Johns Hopkins University in their study to collect data on possible adverse reactions to influenza vaccination. Through this program, the County earned \$404.

Five hundred sixty vaccine doses were transferred to partner organizations:

- 120 doses to Crest Haven Nursing and Rehabilitation Center
- 40 doses to Cape May County Technical High School LPN students
- 300 doses to Woodbine Developmental Center
- 100 doses to Volunteers in Medicine

Out of the remaining 5,520 vaccine doses, 4,882 vaccinations were provided by the Department of Health. This includes 30 doses provided under the Vaccines for Children program (VFC) and 205 doses provided under the VaxCare program<sup>1</sup>.

<sup>1</sup> Due to a refrigerator malfunction, 93 doses of FluMist were discarded. The unused county-purchased Sanofi-Pasteur doses (407) were returned to the manufacturer for an account credit. The unused VaxCare doses (192) were returned to VaxCare at no cost.

The Department of Health organized one mass vaccination drive-through clinic on October 23, 2011. Efforts were made to increase the number of children vaccinated and four clinics were held specifically targeting children and families, one at the Health Department, two at elementary schools (Glenwood Avenue School in Wildwood and Woodbine Elementary School), and one at a church (St. Frances Cabrini in Ocean City). Six special senior clinics were held for seniors and included the High-Dose vaccine. Senior clinics were held at the Health Department (2), the Lower Township Senior Center (2), the Ocean City Senior Center, and the Upper Township Senior Center.

Additional vaccination efforts included catch-up flu clinics (Health Department and at Cape May County library), offering vaccine at health fairs (St. Ann's, Disability Day), two clinics for County employees, a clinic for Cape Counseling, and vaccine given to homebound residents and provided through sporadic appointments.

At the end of the influenza season, a total of 5,442 influenza vaccinations had been given to County residents, representing all 16 municipalities, with 4,882 vaccinations provided directly by the Department of Health. Apart from the County Department of Health's vaccination activities, a number of residents received the influenza vaccine from local hospitals, physicians, pharmacies, and supermarket clinics.

Cape Regional Medical Center vaccinated 641 staff and volunteers in addition to 405 eligible patients, for a total of 1,046 influenza vaccinations administered this season.

### **High-Priority Vaccination Groups**

In 2010-11, the Advisory Committee on Immunization Practices (ACIP) recommended universal influenza vaccination for all persons 6 months of age and older. If vaccine is in short supply, ACIP recommends it be prioritized in order to protect those at high-risk for influenza complications<sup>2</sup>. These high-priority groups include:

- Children aged 6 months through 4 years of age
- Persons aged  $\geq 50$  years
- Persons of any age with certain chronic medical conditions including asthma, neurological conditions, heart disease, lung disease, blood disorders, diabetes, kidney or liver disorders, metabolic disorders, weakened immune system, or persons <19 years who are on long-term aspirin therapy.
- Pregnant women
- Residents of nursing homes and long-term care facilities
- American Indians/Alaskan Natives
- Morbidly obese (BMI  $\geq 40$ )
- Household contacts and caregivers who have frequent contact with persons at high risk and who can transmit influenza to those persons at high risk
- Healthcare workers

In addition to the ACIP recommendations, the New Jersey Department of Health and Senior Services (NJDHSS) has mandated flu vaccination for children 6 months to 59 months attending a licensed daycare or preschool since 2008-09.

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<sup>2</sup> [http://www.cdc.gov/flu/about/disease/high\\_risk.htm](http://www.cdc.gov/flu/about/disease/high_risk.htm)

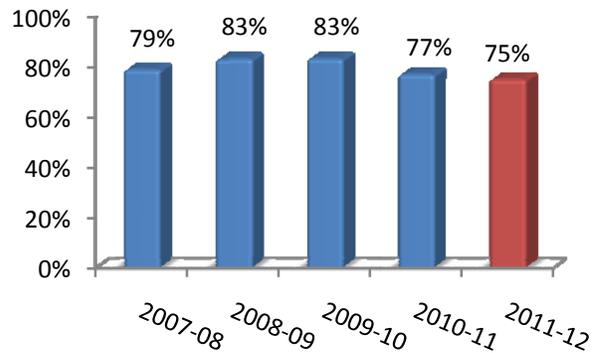
*Note: The remainder of this report will not include the 30 doses provided under the VFC program. Additionally, limited data is available for doses provided under the VaxCare program; this report will include VaxCare program doses unless stated otherwise.*

Out of 4,852 vaccine doses administered by the Department of Health, 3,510 (75%) were given to “high-priority groups,” as defined by ACIP (does not include VaxCare). The percentage of “priority” residents vaccinated by the Department of Health in 2011-12 is slightly lower than the previous year.

**Percentage Vaccinated by ACIP  
"High-Priority" Group**



**Percentage of Persons Vaccinated by  
CMCDH in ACIP Recommended  
Groups, by Year**



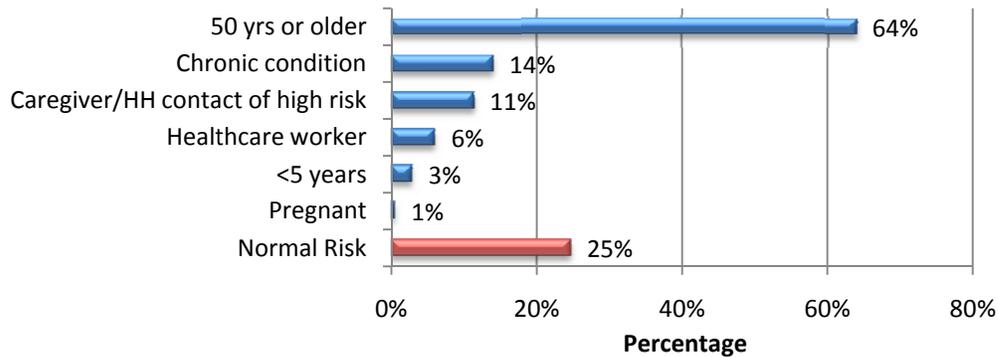
Of the 3,510 persons in ACIP “high-priority” groups:

- 135 were children aged 6 months through 4 years,
- 2,905 were 50 years of age or older,
- 653 had a chronic health condition,
- 523 were household contacts or caregivers of persons at high risk,
- 280 were healthcare workers (including employees of long-term care facilities), and
- 26 were pregnant women<sup>3</sup>.

Compared with the previous year, there were more children <5 years, household contacts or caregivers, healthcare workers, and pregnant women vaccinated.

<sup>3</sup> Sums to greater than 3,510 owing to multiple high-risk categories for some persons.

### Percentage of Persons Vaccinated by ACIP High-Priority Group

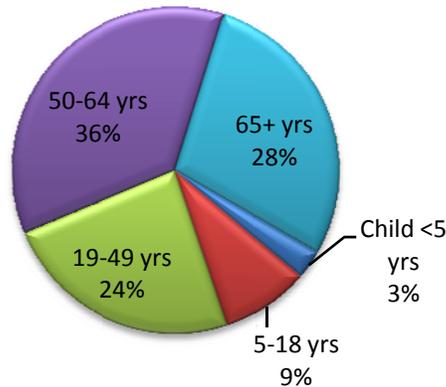


### Demographics

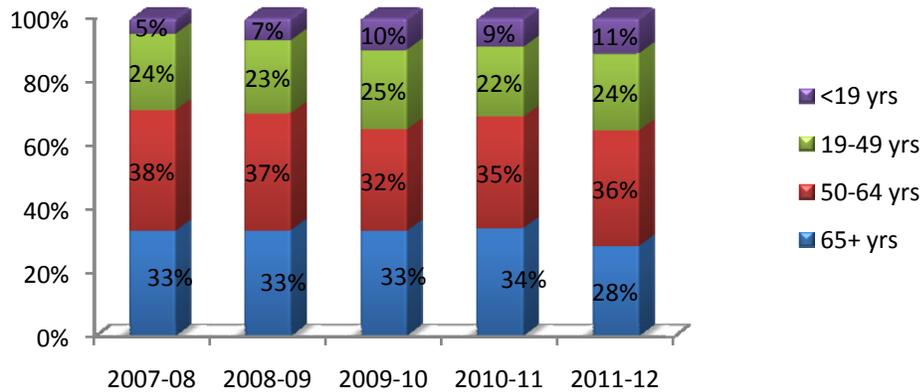
#### Age

The mean age of vaccine recipients was 52 years (median age 57 years), ranging from <1 year to 102 years (76 records missing age). The highest number of vaccinations, 1,726 (36%) was given to persons 50-64 years of age, followed by 1,363 vaccinations (28%) given to persons 65 years and older. A total of 64% of vaccinations were given to persons aged 50 and older. The percentage of persons aged 65 years and older is less than in previous years. Three percent of vaccines were for children 0-4 years, with 11% given to all children ( $\leq 18$  years), which is up from 9% in 2010-11.

### Percentage of Vaccinated Residents by Age Group



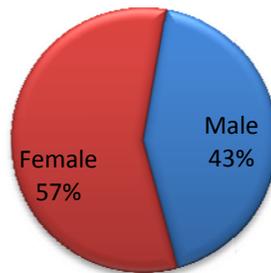
### Percentage Vaccinations Administered by Age Group and Year



### Gender

Fifty-seven percent of those vaccinated were female, 43% were male. The percentage of females was slightly higher than 55% in 2010-11.

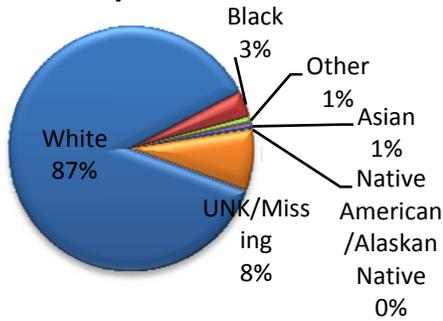
### Percentage of Vaccinated Residents by Gender



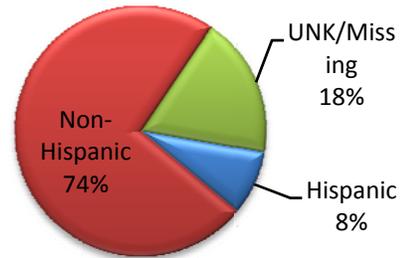
### Race/Ethnicity

Out of 4,852 vaccinations given by the Department of Health, 87% reported White race, 3% reported Black, 1% reported Asian, <1% reported Native American/Alaskan Native, 1% identified as other, and for 8%, race was unknown or missing. The consent form for 2011-12 was modified to reflect national standards on the collection of data related to race and ethnicity. The percentage of people reporting unknown race or not answering the question doubled from 4% in 2010-11 to 8% in 2011-12. Eight percent of respondents identified themselves as Hispanic (compared to 4% in 2010-11). According to US Census data for 2010, 5.7% of Cape May County residents are Black (included in one or more races) and 6.2% are Hispanic or Latino (any race). The percentage of vaccine given to Hispanic or Latino recipients is slightly higher than the population percentages, while the percentage of vaccinations for Black residents remains lower than expected.

**Percentage of Vaccinated Residents by Race**



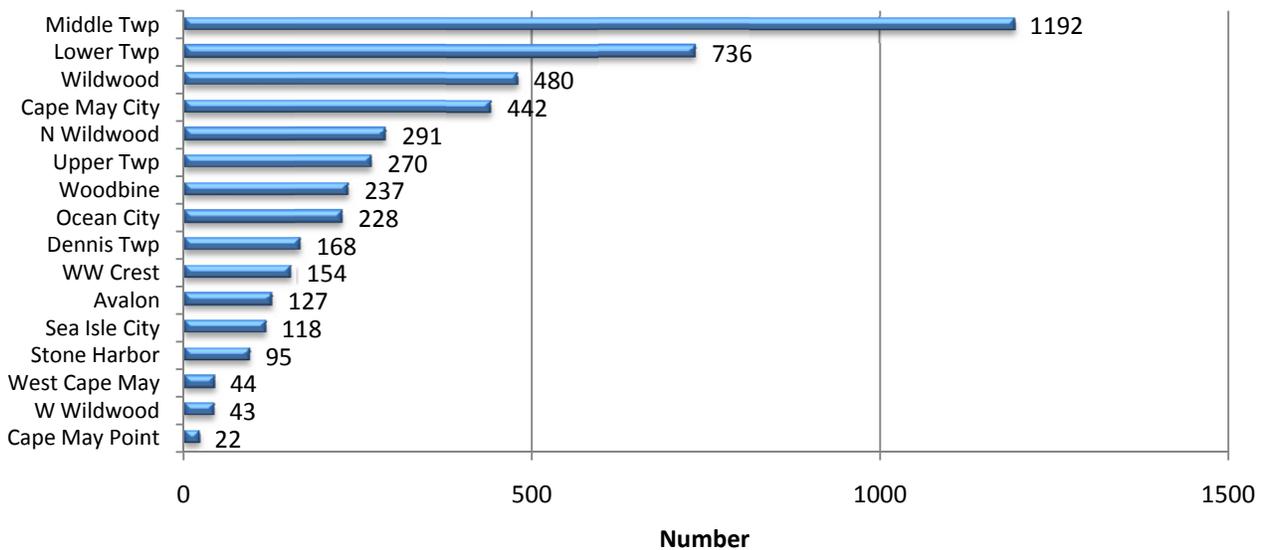
**Percentage of Vaccinated Residents by Ethnicity**



Residence

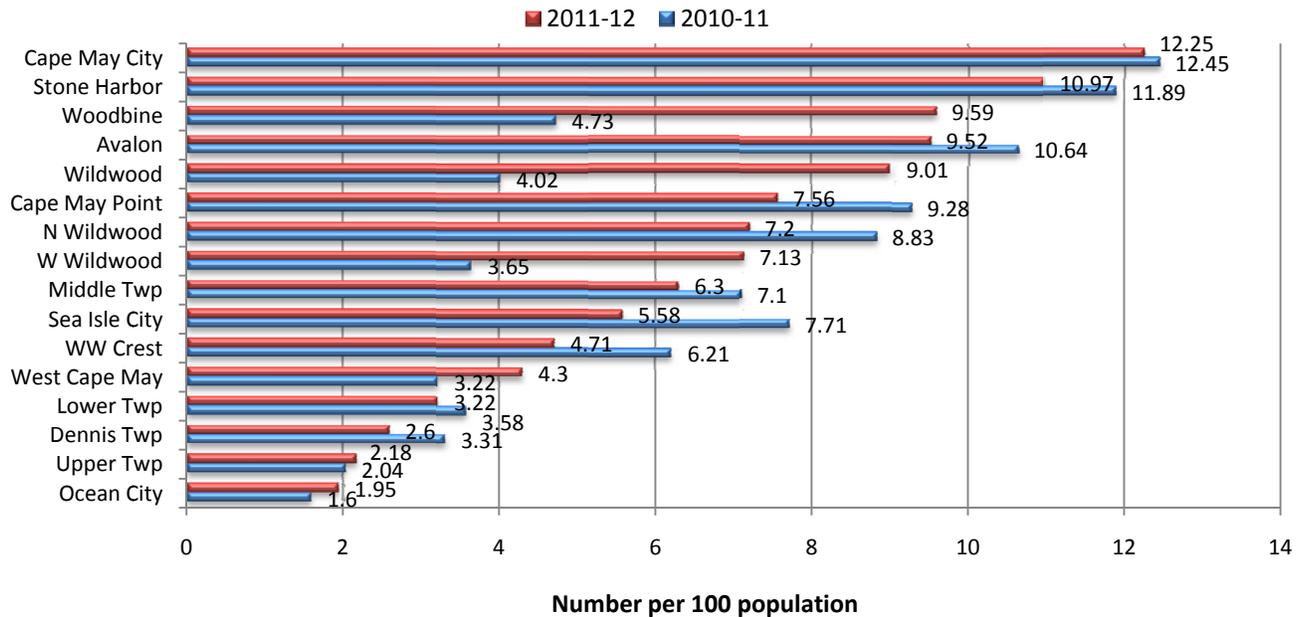
Residents were vaccinated from all 16 municipalities, with the highest number (1,192) living in Middle Township, followed by 736 in Lower Township, 480 in Wildwood, and 442 in Cape May<sup>4</sup>. The vaccination rates (# persons vaccinated per 100 population), however, were highest in Cape May (12.25), followed by Stone Harbor (10.97), Woodbine (9.59), Avalon (9.52), and Wildwood (9.01). The vaccination rates in Woodbine and Wildwood increased dramatically over 2010-11. The lowest vaccination rates were in Ocean City (1.95), Upper Township (2.18), and Dennis Township (2.6).

**Total Number of Residents Vaccinated by Municipality**



<sup>4</sup> There were 199 (4%) vaccines given to persons listing an out-of-county address on the patient registration form.

### Vaccination Rate by Municipality



Out of the 199 persons vaccinated who listed an Out of County address, 64% were female and 54% were between the ages of 19-49. Sixty-seven percent were in an ACIP “high-priority” group, 24% being healthcare workers. Four percent of out-of-county residents received the high-dose flu vaccine.

### Date of Vaccination

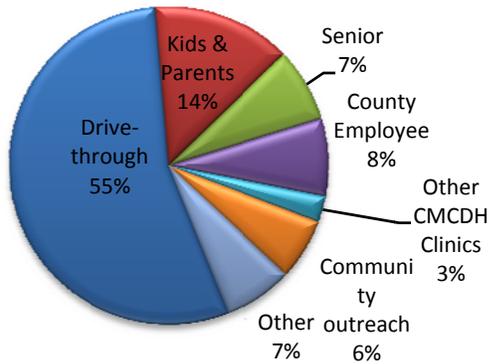
Out of 4,852 vaccinations administered by the Department of Health, 2,657 (55%) were provided at the drive-through flu clinic. Fourteen percent of vaccinations were provided at clinics targeting children and their families; 8% at clinics for county employees and partner agencies; 7% at special senior clinics; and 6% at various community outreach opportunities.

The percentage of persons vaccinated at the drive-through clinic was slightly lower than 2010-11. Since the 2009-10 season, only one drive-through clinic has been held, which reflects the lower percentages compared to prior years. Of persons vaccinated at the drive-through flu clinic, 75% were in an ACIP “high-priority” group. Forty-four percent were between 50-64 years of age, 36% were 65 years or older, and 18% were between 19-49 years of age. The minimum age for vaccination at the drive-through flu clinic was maintained at 14 years. No vaccinations were given to persons less than 14 years of age at the drive-through clinic.

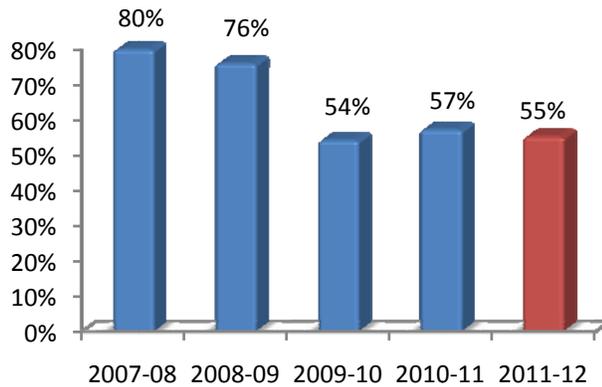
The number of children and adults vaccinated at clinics targeting children and their families increased in 2011-12. The clinics held in area schools may have contributed to this increase. At the children and family clinics, 53% of vaccinations were given to children, 30% to persons 19-49 years of age, 11% to persons 50-64 years, and 5% to seniors.

At the special senior clinics, 64% were 65 years or older, 24% were between 50-64 years, and 11% were between 19-49 years of age.

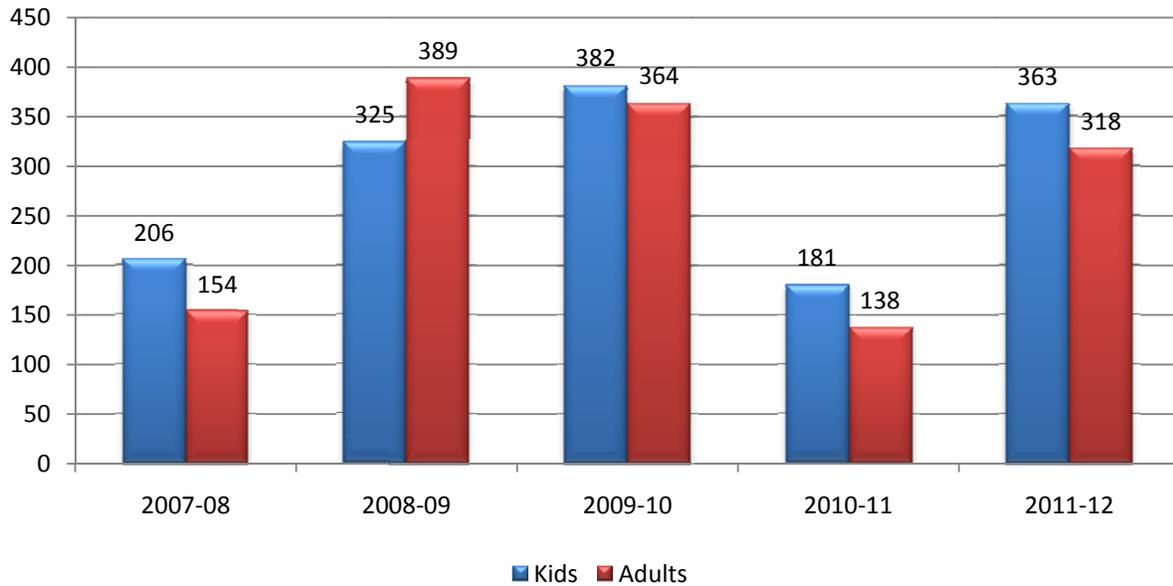
**Vaccinations by Clinic Type**



**Percentage Vaccinated by CMCDH at Drive-Through, by Year**



**# Vaccinated at Children's Clinics, by Year**



**Clinical Information**

Patients who reported a severe allergy to eggs or other vaccine component, or who had a history of Guillain-Barré syndrome (GBS) were advised they needed to receive the flu vaccine from their personal physician. Three people who reported a severe egg or vaccine component allergy were vaccinated (<1%, does not include VaxCare program). Two persons reporting a severe allergy were vaccinated at the Glenwood Avenue school clinic and one was vaccinated at a non-clinic time. No one who reported a history of GBS received a vaccine.

Persons who reported a severe allergy to latex or Thimerosal were able to receive a flu vaccine from the Department of Health, but not at the drive-through flu clinic. Twenty-six people reported an allergy to latex or Thimerosal. Of the 26, 4 received the vaccine at the drive-through flu clinic.

Persons who reported a previous serious adverse reaction to a flu vaccine were advised to discuss the reaction with a nurse before receiving a flu vaccine. Six people (<1%) reported a previous serious vaccine. People who reported having a fever on the day of vaccination are advised to wait until they are recovered before getting the flu vaccine. Two people with a reported fever (<1%) were vaccinated.

FluMist was offered as a vaccine option at certain clinics. Since FluMist is a live attenuated vaccine, additional screening questions were indicated. Persons receiving FluMist should NOT include the following categories:

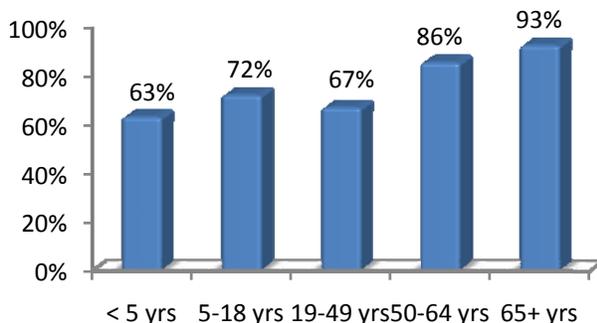
- Pregnant
- Chronic medical conditions
- Wheezing or asthma if less than 5 years of age
- Taking antiviral medications
- Taking long-term aspirin therapy if less than 19 years
- Close contact with someone in protective isolation
- Receipt of other live vaccines within one month

Of 106 people receiving FluMist, 1 person reported a chronic medical condition; no one reported pregnancy, wheezing or asthma, antivirals or aspirin therapy, or close contact with someone in a protective environment. Two people reported receiving another vaccine within the past month. These persons received further medical evaluation to determine if the vaccine received was a live virus vaccine.

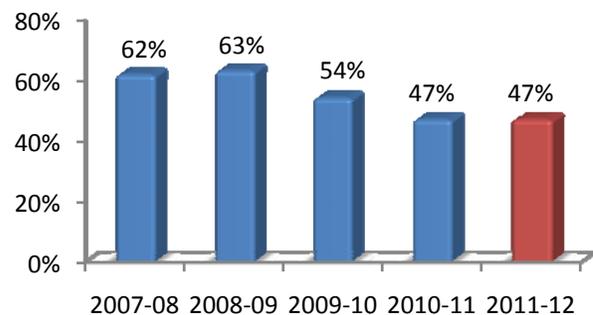
### Vaccination History

Three thousand seven hundred fourteen persons (81%) who were vaccinated this year by the County had also received the influenza vaccine last year (does not include VaxCare, 64 missing). By age group, the percentage who received a flu vaccine the previous year was positively associated with increasing age (132 missing).

**By Age Group, Percentage who Received a Flu Shot Last Year**



**Of Persons Receiving Flu Vaccine Last Year, Percentage Vaccinated at Drive-Through, by Year**



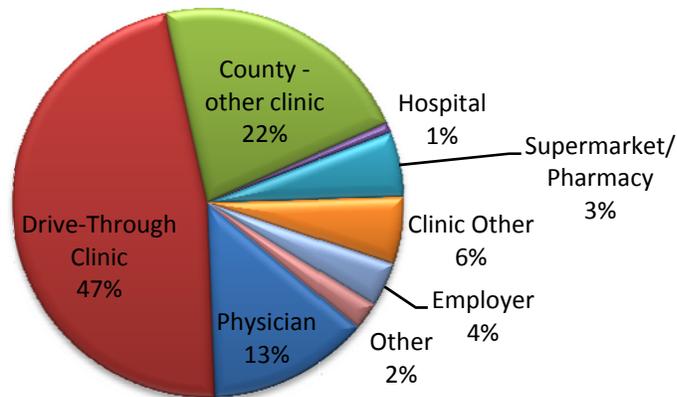
Three thousand three hundred ninety out of 3,714 (91%) who received the vaccine last year specified where they received it. Responses were compiled into the following categories:

- Physician
- Drive-through flu clinic

- County clinic (non drive through)
- Supermarket or pharmacy
- Other type of clinic
- Hospital
- Employer

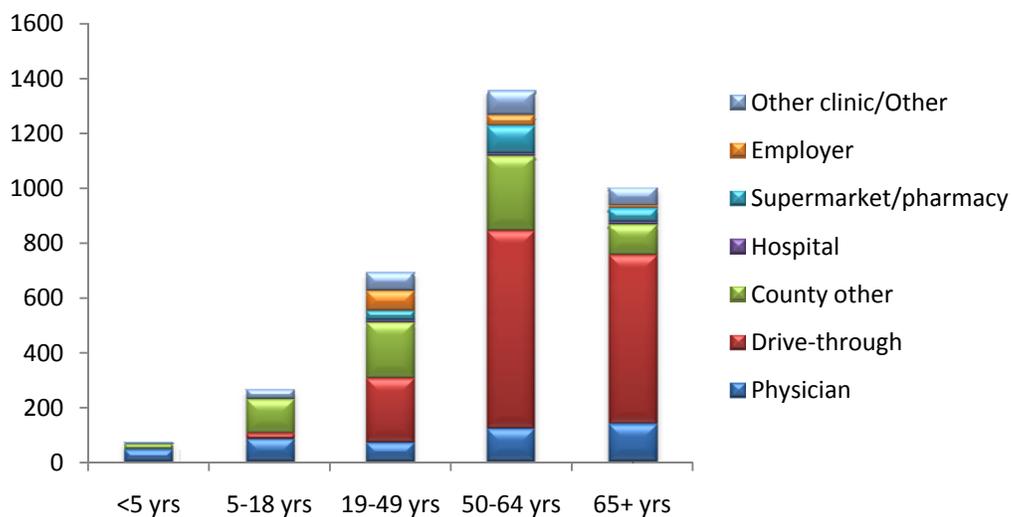
Sixty-nine percent of those receiving the flu vaccine last year received it from the County, with 47% receiving their vaccine at the drive-through clinic. This percentage demonstrates a high level of satisfaction with Health Department flu clinics.

**Where Residents Received Influenza Vaccine Last Year**



By age group, children received their vaccine last year primarily from their physician or at a County Department of Health clinic. Older children were more likely to receive the vaccine from the County. Persons 19-49 years of age predominantly received the previous vaccine from the County, with almost an equal amount receiving it at the drive-through clinic as compared with other County clinics. Persons 50 years and older overwhelmingly received the previous year's vaccine at the drive-through clinic.

**Location of Last Year's Vaccine, by Age Group**



## Program Marketing

The Cape May County Department of Health's marketing plan for the 2011-12 season was similar to 2010-11. For the drive-through clinic, it is critical that residents bring completed consent forms with them to the clinic, rather than obtaining and completing forms onsite. Having completed consent forms in advance improves traffic flow and the efficiency of the drive-through flu clinic. In addition, people stopping to complete consent forms in their cars is a safety hazard that the Department of Health aims to prevent. As part of the marketing effort, consent forms were disseminated in advance of the drive-through clinic to the public in a variety of settings:

- Health Department lobby and clinics
- Health Department's website
- Paid placement in the Atlantic City Press, Herald, and Shoppe newspapers
- Spanish/Latin American groceries (LINCS)
- Predominantly African American and Hispanic churches (LINCS)
- Healthcare community, including all physician practices, community clinics, hospitals, and EMS (via LINCS)
- Special needs groups, including County Departments of Aging and Social Services, US Coast Guard, County and Municipal senior centers, Municipal Halls, assisted living facilities, ARC, senior residences, Puerto Rican Action Committee, Cape Human Resources, School superintendents, School nurses, Churches (via LINCS)

Apart from placing the consent forms, information about the flu vaccination program was included in the following venues:

1. Health Department Flu Hotline and website
2. Health Department's Facebook page
3. Radio spots on the Coast and WIBG
4. On-air radio broadcast on the Coast
5. Well connect – direct telephone outreach through VaxCare

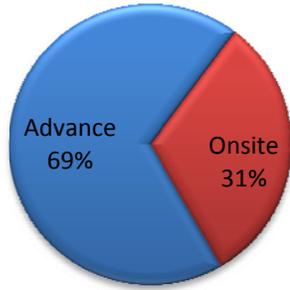
Continuing from last year, efforts were made to target African Americans and Hispanic residents, through the distribution of information and consent forms via LINCS. Hard copies were not distributed to these groups this year.

Of the 2,657 persons receiving their influenza vaccination at the drive-through clinic, 2,027 forms (76%) were entered with source information (low percentage due to poor data entry). Of the 2,027 records with source information, 1,389 residents (69%) brought a completed consent form with them. The remaining 638 (31%) received and completed a consent form when they arrived at the drive-through clinic. The percentage of persons bringing an advance consent form was lower than last year and is significantly lower than the 80% goal<sup>5</sup>. Of those who received their vaccine at the drive-through clinic the previous year, 75% brought a completed consent form with them.

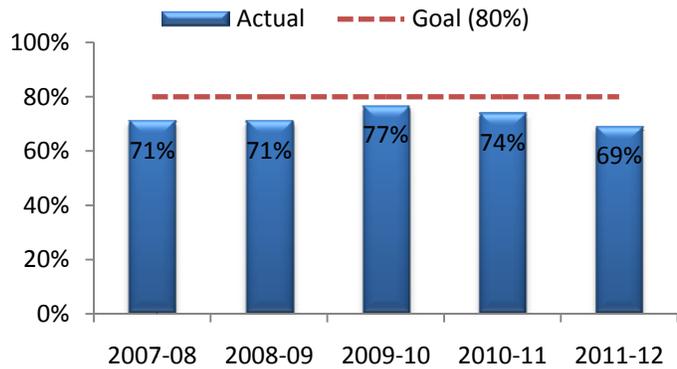
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<sup>5</sup> 628 forms entered did not include a source code, possibly under or overestimating the percentage of advance consent forms.

**Percentage of Flu Consent Forms Completed in Advance**

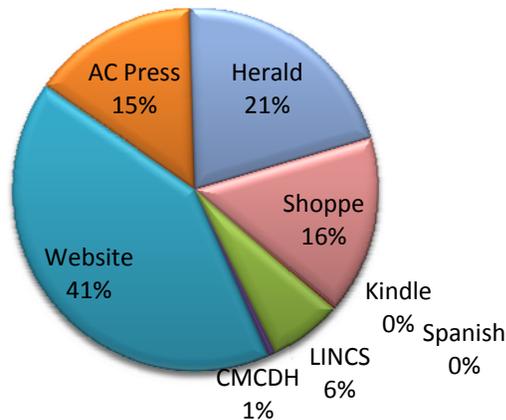


**Percentage Advance Consent Forms for Drive-through, by Year**

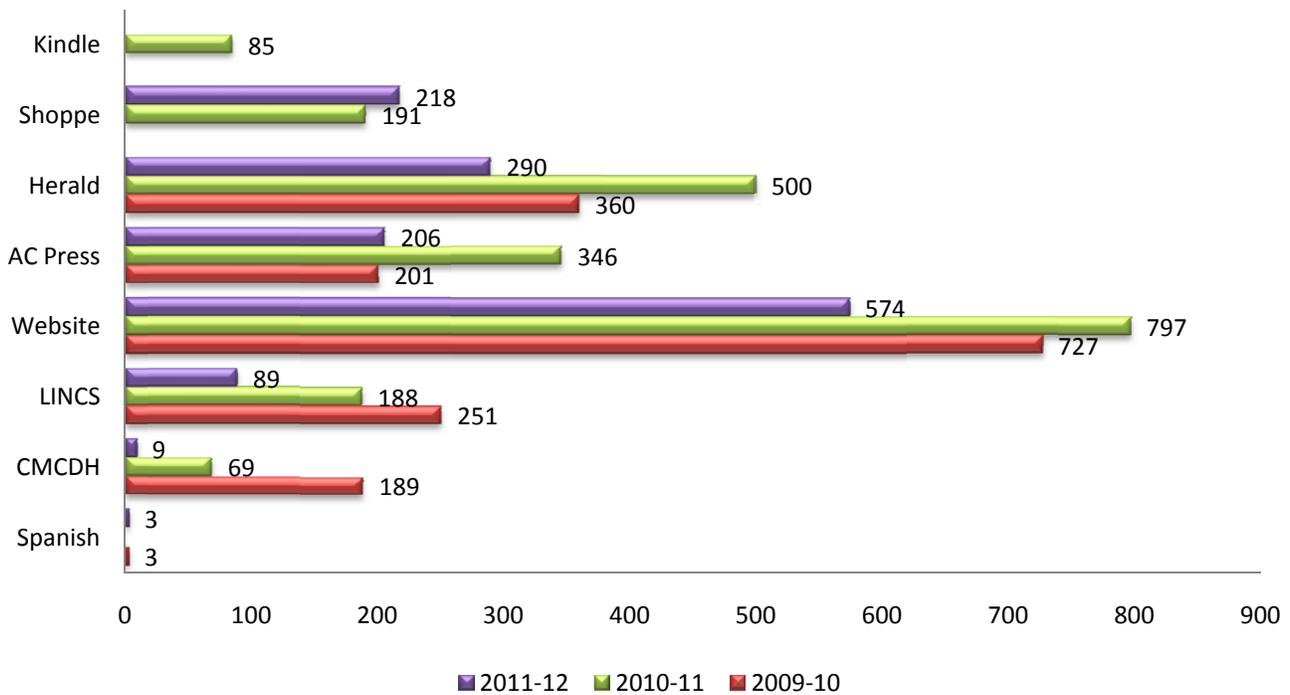


Of those that brought a completed consent form, the majority obtained their forms from the CMCDH website (41%), followed by the Herald newspaper (21%) the Shoppe (16%), and the Atlantic City Press (15%). The percentage of forms obtained from the Shoppe (2<sup>nd</sup> year of advertising), increased from 9% in 2010-11 to 16% this year. The percentage of forms received from LINCS continued to decrease from 14% in 2009-10 to 9% in 2010-11 to 6% this year. Kindle Ford has a large e-mail client list that has been an important source of information (4% of advance consent forms in 2010-11). However, this year no forms were received from Kindle's e-mail list.

**Source of Advance Consent Forms (%), Drive-Through Clinics**

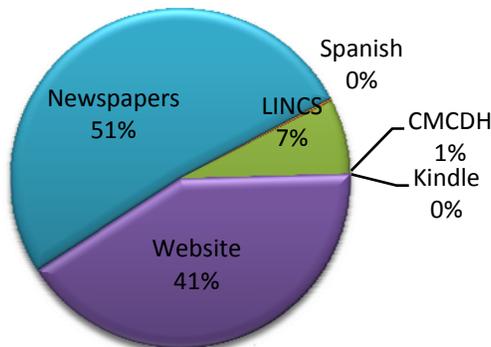


### Source of Consent Form for Drive-Through, by Year

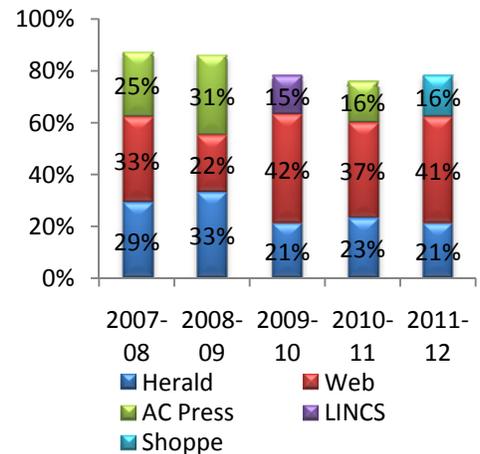


The use of the Shoppe was the only individual source of forms that increased in number this year. Overall, the use of newspapers as a source of consent forms increased this year, as did the website. While the website was used more than any single newspaper, newspapers as a group were the most used source of consent forms. LINCS and the Health Department decreased as sources of forms. Three Spanish-language forms were used this year. Disseminating Spanish consent forms via LINCS only without hard copies was not effective. Fifty-one percent of advance forms were brought from local newspapers, up substantially compared with 48% in 2010-11 and 32% in 2009-10.

### Source of Advance Consent Forms by Category

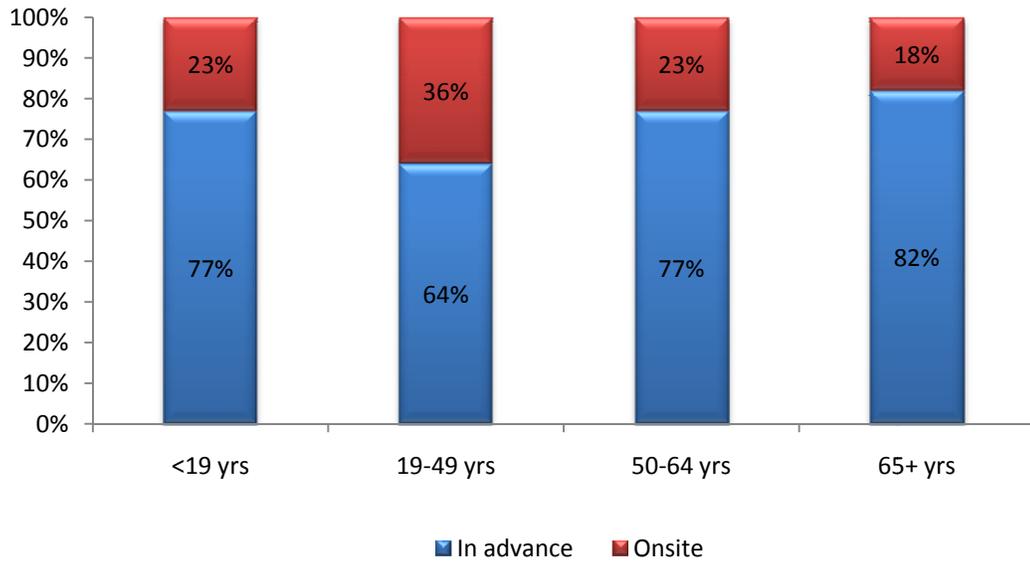


### Top 3 Sources of Advance Consent Forms, by Year



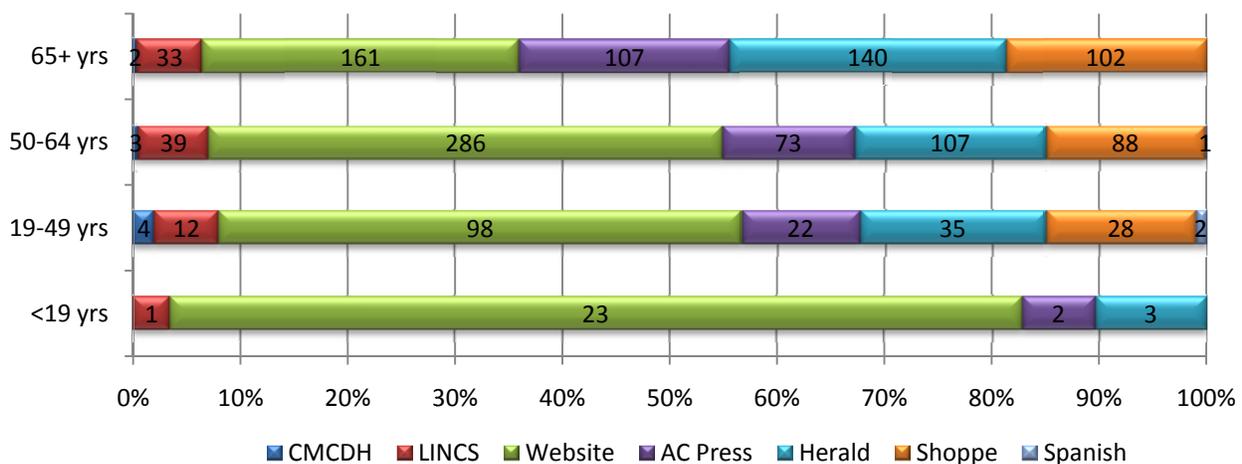
By age group, the percentage that brought an advance consent form increased in all age groups from the previous year, with the exception of the 19-49 year olds, which have the lowest percentage of advance consent forms. Seniors exceeded the 80% advance consent form goal with 82% bringing a completed consent form with them.

**Percentage with Completed Consent Forms, by Age Group**



The use of the website as a source of consent forms is negatively associated with age. Nevertheless, the website remained the largest single source of consent forms for all age groups, including seniors. Persons 65 years and older were more likely to bring a consent form from a newspaper as compared to other age groups, and were most likely to use the Atlantic City Press. For all age groups, the Herald was the single newspaper used most often.

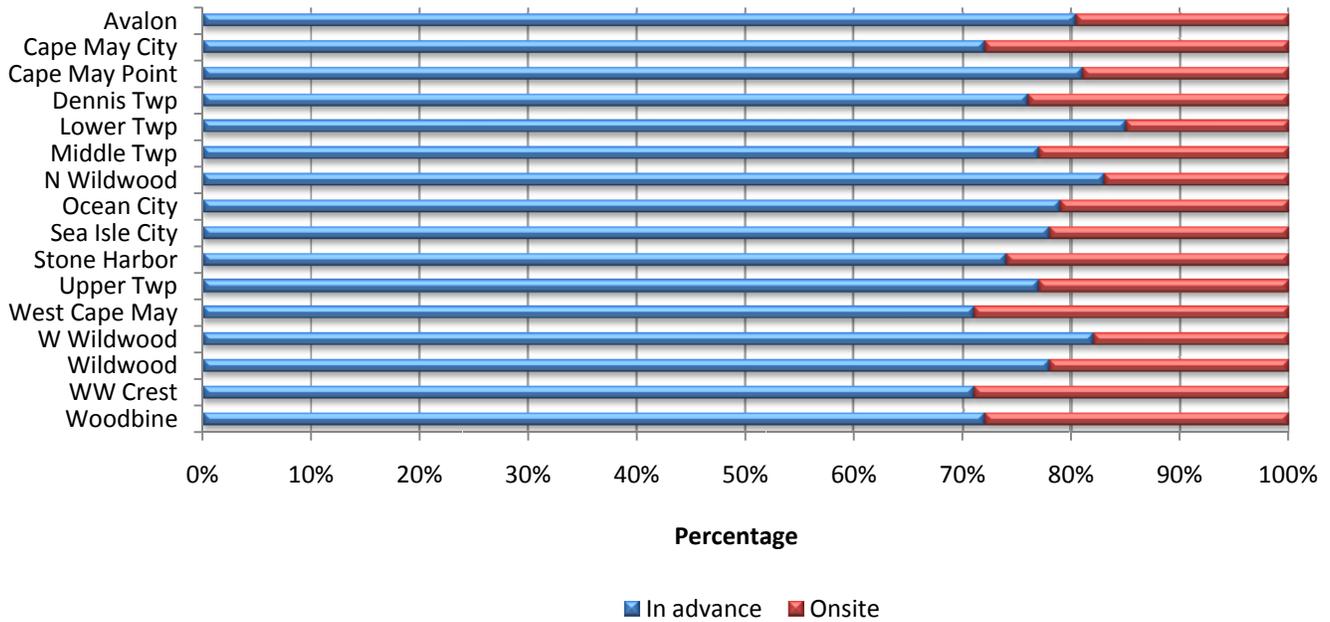
**Source of Advance Consent Forms, by Age Group**



Lower Township, North Wildwood, Avalon, and West Wildwood had the largest percentage of advance consent forms, with Wildwood Crest, West Cape May, Cape May, and Woodbine

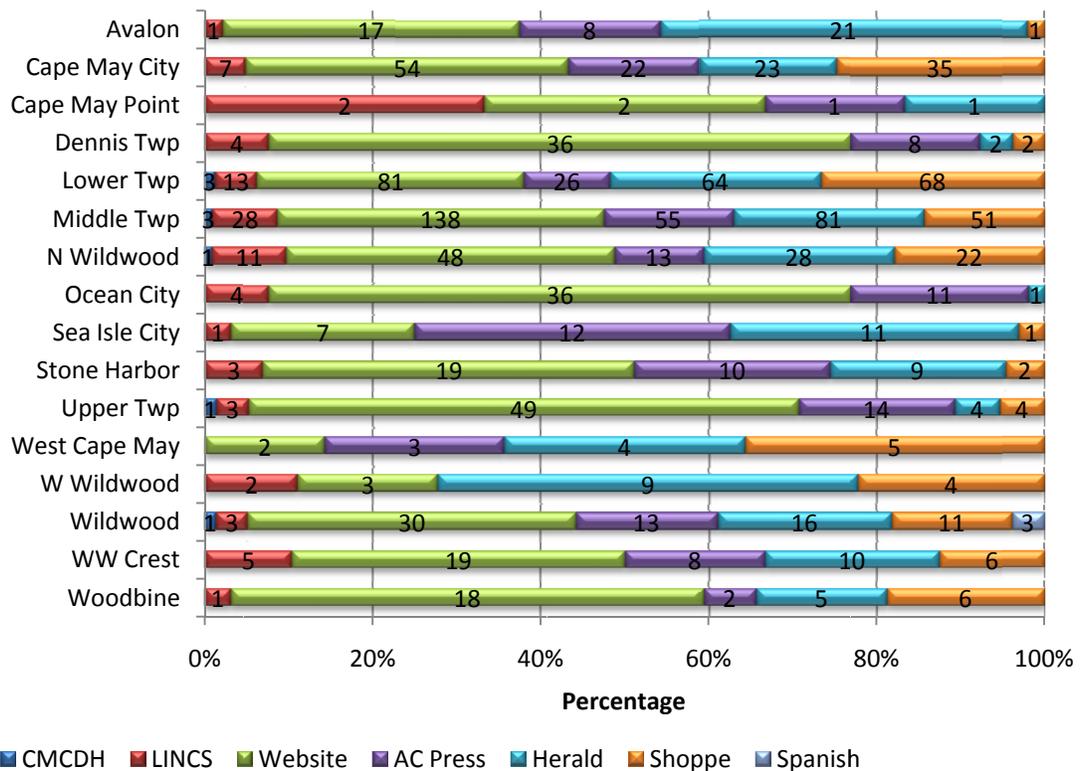
having the lowest percentages of advance consent forms. Five out of 16 municipalities (31%) met or exceeded the goal of 80% (compared to 13% of municipalities in 2010-11).

**Percentage Advance Consent Forms by Municipality**



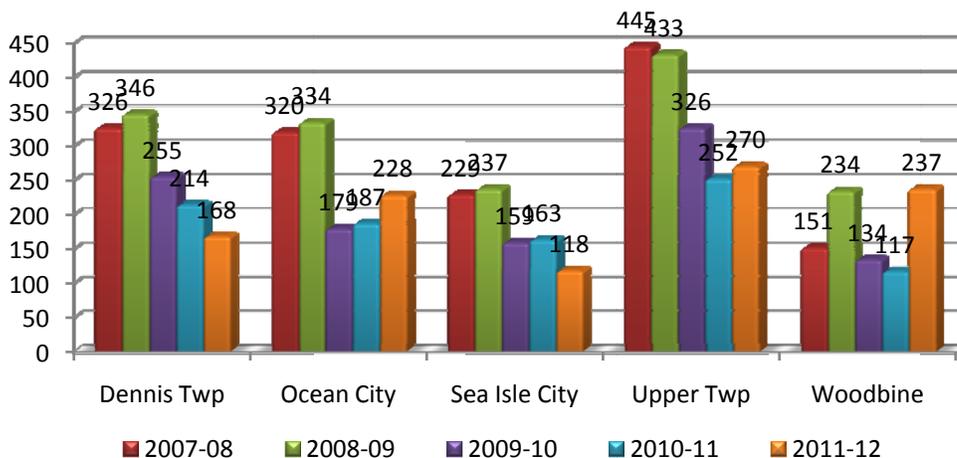
The website was used often as a source of forms in all municipalities except West Cape May and West Wildwood.

**Source of Advance Consent Forms by Municipality**

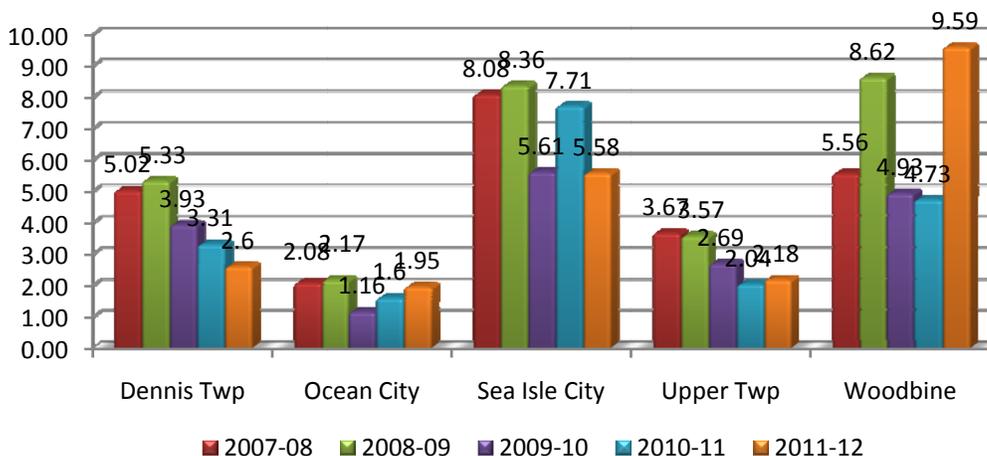


Efforts continue to increase the number of residents receiving their flu shots from the northern part of the County. Targeted municipalities include Dennis Township, Ocean City, Sea Isle City, Upper Township, and Woodbine. The vaccination rate per municipality increased in Ocean City, Upper Township, and Woodbine. Holding clinics in Ocean City and Woodbine may have contributed to the increases. Vaccination rates decreased in Dennis Township and Sea Isle City.

**Number Residents Vaccinated, 2007-08 through 2011-12**



**Vaccination Rate (per 100 population), 2007-08 through 2011-12**



Respondents were asked where they heard about that day's flu clinic. Newspapers were overwhelmingly the primary source of information. Information disseminated from school and work, as well as the road signs and website were also important reminders.

### Where did you hear about today's flu clinic?

