

Fluzone® (Influenza Vaccine) and Influenza Market Update

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Vice President New Products and Immunization Policy

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A Lot Has Changed Over the Years

2000

- National Influenza Vaccine Summit (NIVS) created out of vaccine supply challenges
- First recommendations put in place for adults 50 years of age and older
- Immunization rates low¹
 - 18-49: 17.1%
 - 50-64: 34.6%
 - 65+: 64.3%
- 77.9M doses produced, 70.4M doses distributed²

Today

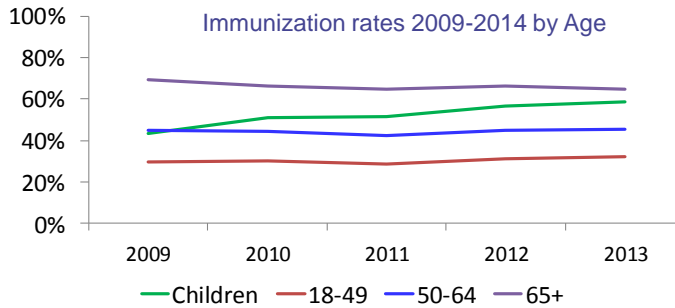
- NIVS and NAIS have joined forces to become the National Adult and Influenza Immunization Summit (NAIIS)
- Universal recommendation been in place for 5 years
- Immunization rates improving
 - 6 mo – 17: 58.9%
 - 18-49: 32.3%
 - 50-64: 45.3%
 - 65+: 65%
- 151-156M doses produced, 147.8M doses distributed³

References: 1. http://www.cdc.gov/flu/pdf/professionals/nhis89_08fluvaxtrendtab.pdf accessed on 5/1/15 2. http://www.izsummitpartners.org/wp-content/uploads/2007/NIVS/Santoli_2007.pdf accessed on 5/1/15; 3. <http://www.cdc.gov/flu/fluvaxview/reports/report1314/trends/index.htm> accessed on 5/8/15; 4. <http://www.cdc.gov/flu/professionals/vaccination/vaccinesupply.htm> accessed on 5/1/15

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But, Immunization Rates Over the Last Five Years Have Remained Relatively Flat



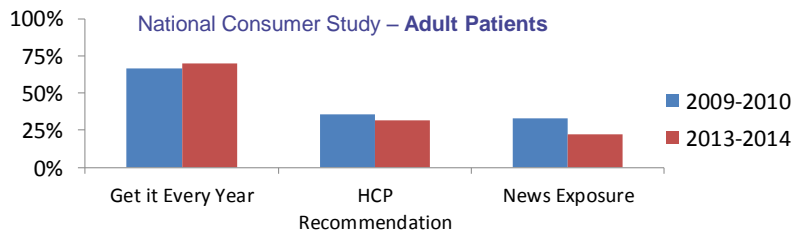
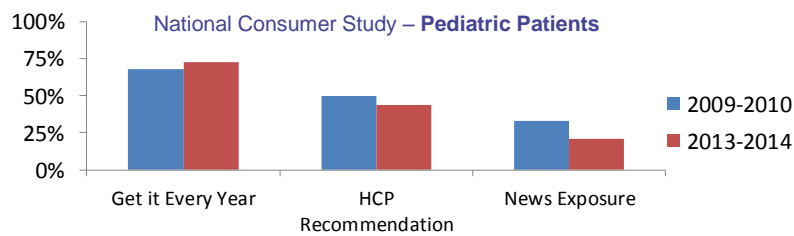
- Overall immunization rate was 41.2% in 2009 vs. early estimate of 40.3% in 2014

References: http://www.cdc.gov/flu/pdf/professionals/nhis89_08fluvoxtrendtab.pdf accessed on 4/29/2015;
<http://www.cdc.gov/flu/fluvoxview/trends/age-groups.htm> accessed on 4/29/2015;
<http://www.cdc.gov/flu/fluvoxview/reports/report11314/trends/index.htm> accessed on 4/29/15.4.
http://www.cdc.gov/flu/fluvoxview/coverage_0910estimates.htm accessed on 5/4/15

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The Primary Reasons Driving Immunization Haven't Changed

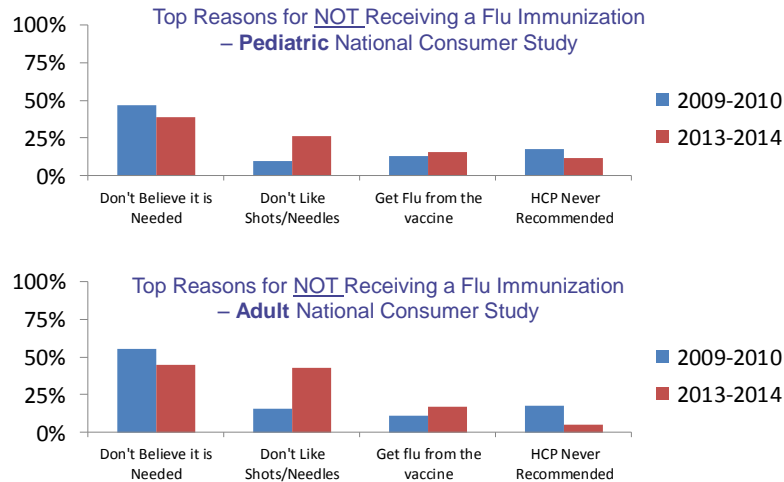


Reference: 2009-2010 National Consumer Influenza Immunization Study. 2013-2014 National Consumer Influenza Immunization Study

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Lack of Perceived Need Still Main Reason to NOT Get Immunized



Reference: 2009-2010 National Consumer Influenza Immunization Study, 22013-2014 National Consumer Influenza Immunization Study

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Disease Burden of Influenza Much Greater in 65+ Population Despite Higher Immunization

- Adults aged 65 and older typically account for between 50 and 60 percent of flu-related hospitalizations and almost all (90 percent) of flu-related deaths¹
- The 2014-2015 flu season recorded the highest hospitalization rate among people 65 and older since data collection started in the 2005-2006 season²
- Eighty-six percent of adults aged 65 and older have at least one chronic condition, and 68 percent of Medicare beneficiaries have two or more chronic conditions^{3,4}
- For patients 65 years and older, the risk for flu-attributed death has been shown to be five times higher for persons with chronic heart disease than for those without this condition⁵

References: 1. <http://www.cdc.gov/flu/about/disease/65over.htm>. Accessed on March 26, 2015. 2. <http://www.cdc.gov/flu/weekly/summary.htm>. Accessed April 28, 2015. 3. CDC. Percent of U.S. Adults 55 and Over with Chronic Conditions. Percent of U.S. Adults 55 and Over with Chronic Conditions. http://www.cdc.gov/nchs/health_policy/adult_chronic_conditions.htm. 4. Lochner KA, Cox CS. Prevalence of multiple chronic conditions among medicare beneficiaries, United States, 2010. *Prev Chronic Dis* 2013;10:120137. 5. Schanzer DL, Langley JM, Tam TW. Co-morbidities associated with influenza-attributed mortality, 1994-2000, Canada. *Vaccine*. 2008;26:4697-703.

Can New Vaccines Change the Trajectory of Immunization

- The most burdened population is 65+ yet the immunization rate hasn't changed over the past decade
- Fluzone High-Dose vaccine provides 24% better protection than Fluzone vaccine in adults 65 years of age and older
- Both health care providers and patients are seeing the value and increasing usage of Fluzone High-Dose Vaccine
 - ~40% of all immunized seniors received Fluzone High-Dose vaccine in 2014
 - Over 50% are estimated to receive Fluzone High-Dose vaccine in 2015

Sanofi Pasteur Continues to Invest in the Future of Influenza Prevention

- Broadening protection through converting presentations to quadrivalent formulation
 - Fluzone Intradermal Quadrivalent vaccine licensed for the 2015-2016 season
 - Fluzone High-Dose Quadrivalent vaccine is in development
- Facilitating tracking immunizations
 - 2D barcoding for unit of use
- Researching options for every age group
 - Robust universal vaccine development programs, alternative production methods, adjuvants

IMPORTANT SAFETY INFORMATION

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Important Safety Information

Indication

Fluzone, Fluzone Quadrivalent, Fluzone Intradermal Quadrivalent, and Fluzone High-Dose vaccines are indicated for active immunization for the prevention of influenza disease caused by influenza A subtype viruses and type B virus(es) contained in each vaccine.

Fluzone and Fluzone Quadrivalent vaccines are approved for use in persons 6 months of age and older.

Fluzone Intradermal Quadrivalent vaccine is approved for use in persons 18 through 64 years of age. Fluzone High-Dose vaccine is approved for use in persons 65 years of age and older.

Safety Information

The most common local and systemic adverse reactions to Fluzone, Fluzone Quadrivalent, Fluzone Intradermal Quadrivalent, and Fluzone High-Dose vaccines include pain, erythema, and swelling at the injection site (also pruritus in adults receiving Fluzone Intradermal Quadrivalent vaccine); myalgia, malaise, headache, and fever (also irritability, abnormal crying, drowsiness, appetite loss, and vomiting in young children receiving Fluzone or Fluzone Quadrivalent vaccine). Pruritus, erythema, swelling, and induration at the injection site occurred more frequently with trivalent Fluzone Intradermal vaccine than with trivalent Fluzone vaccine. Other adverse reactions may occur.

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Important Safety Information (Continued)

Safety Information Continued

Fluzone, Fluzone Quadrivalent, Fluzone Intradermal Quadrivalent, and Fluzone High-Dose vaccines should not be administered to anyone with a known hypersensitivity (eg, anaphylaxis) to any vaccine component, including egg protein or thimerosal (the multidose vial is the only presentation containing thimerosal), or to a previous dose of any influenza vaccine.

If Guillain-Barré syndrome has occurred within 6 weeks following previous influenza vaccination, the decision to give Fluzone, Fluzone Quadrivalent, Fluzone Intradermal Quadrivalent, or Fluzone High-Dose vaccine should be based on careful consideration of the potential benefits and risks. Vaccination with Fluzone, Fluzone Quadrivalent, Fluzone Intradermal Quadrivalent, or Fluzone High-Dose vaccine may not protect all individuals.

Before administering Fluzone, Fluzone Quadrivalent, Fluzone Intradermal Quadrivalent, or Fluzone High-Dose vaccine, please see full Prescribing Information.

Thank you.