Monthly Influenza Vaccination Uptake: United States, 2007-08 & 2008-09

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PURPOSE

1. Show 2008-09 and/or 2007-08 national monthly distribution of influenza vaccination from three data sources—NHIS, BRFSS, SDI—by selected key population sub-groups

2. Compare SDI estimated monthly pattern of influenza vaccination uptake during the past two seasons with patterns from NHIS and BRFSS

Influenza vaccinations, physician offices 2008-09 & 2007-08

Overall influenza vaccinations increased 8% this season over last season.

*Flu administrations (n): 2008-09 =1.8M; 2007-08 =1.6M

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Estimating seasonal coverage of influenza vaccination, NHIS

- NHIS data sets with the final full-season coverage data are posted 14 months after the season, in June
  - April – July interviews provide full-season coverage
- Early release selected results are posted 6 months following each quarter
  - In June, 2 months post season, December interviews provide:
    - Aug – Nov uptake
    - Predict full-season coverage for past season using past monthly uptake curves
  - In Sept, March interviews can be used for past season’s preliminary near-full-season coverage.

**Figure 1. Influenza vaccinations, 2007-08 season by age & month for persons 6 months of age (n=3,807)**

Data source: CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates based on household interviews; sample of noninstitutionalized civilians.

Note: 116,155,092 reported doses received (plus 3.1 million child 2nd doses); 115 million doses distributed (minus 5% for wasted doses); Equals a 9% over-reporting bias (119.3/109.3 million = 1.09)
Figure 2. Influenza vaccination, 2007-08 season, by age, race/ethnicity and month of vaccination (n=3,807)

Data source: CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates based on household interviews; sample of noninstitutionalized civilians. population.

Total Doses Reported Here = 116,155,082

Influenza vaccinations: percentage of total 2007-08 uptake by month, United States
National Health Interview Survey (NHIS), 2008

Age Group: i 6 months

Data source: CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates are based on household interviews of a sample of the civilian noninstitutionalized population, n=3,807 vaccinees.
Figure 3. Influenza vaccination, 2007-08 season, for persons aged 6 months to 18 years, by race/ethnicity and month of vaccination (n=894)

Data source: CDC/NCHS, National Health Interview Survey, 2008 preliminary data.

Total Doses Reported Here = 24,808,140 (21.4% of total uptake)

Influenza vaccinations: percentage of total 2007-08 uptake by month by race/ethnicity – U.S.
National Health Interview Survey, 2008
Age Group: 6m–18y

Data source: CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates are based on household interviews of a sample of the civilian noninstitutionalized population, n=894 vaccinees.
Influenza vaccinations: percentage of uptake by month & race/ethnicity, 07/08 & 08/09
Behavioral Risk Factor Surveillance System (BRFSS)*
Age Group: 19-64 years

Data source: CDC/NCCDPHP/BSB, BRFSS, 2008 (Apr – Jul) & 2009 (Jan & Feb) data, 41 states. Estimates are based on household interviews over the telephone of a sample of the civilian noninstitutionalized population, 2008 n=76,388 and 2009 n=4,500 vaccinees.

Influenza vaccinations: percentage of total 2007-08 uptake by month United States
NHIS* in orange and SDI** in white

*CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates based on household interviews; sample of non institutionalized civilians, n=3,807. **Data collected from electronic medical claims processed by physicians on CMS-1500 forms, n=1.6M un-projected flu claims for 6 month+, from 8/2007-3/2008. Does not represent vaccinations given through other channels such as employers, pharmacies, senior centers, etc.
Influenza vaccinations: percentage of total 2007-08 uptake by month United States, NHIS* in orange; SDI** in white

*CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates are based on household interviews of a sample of noninstitutionalized civilians, n=1,150 vaccinees. **Data collected from electronic medical claims processed by physicians on CMS-1500 forms, n≈530K un-projected flu claims, for 65yr+ from 8/2007-3/2008. Does not represent vaccinations given through other channels such as employers, pharmacies, senior centers, etc.

Influenza vaccinations: percentage of total 2007-08 uptake by month United States, NHIS* (orange) and SDI** (white)

*CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates based on household interviews; sample of non-institutionalized civilians, n=2,657 vaccinees. **Data collected from electronic medical claims processed by physicians on CMS-1500 forms, n≈1.04 M un-projected flu administrations for 6m–64yr, from 8/2007-3/2008. Does not represent vaccinations given through other channels such as employers, pharmacies, senior centers, etc.
Influenza vaccinations: percentage of total 2007-08 uptake by month, United States

NHIS* in orange and SDI** in white

Age Group: 6m–18y

Percent of Total Uptake

Aug Sept Oct Nov Dec Jan Feb Mar

0 5 10 15 20 25 30 35 40 45 50 55

CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates are based on household interviews; sample of non-institutionalized civilians, n=894 vaccinees. **Data collected from electronic medical claims processed by physicians on CMS-1500 forms, n=559K un-projected flu administrations for 6m-18 yr from 8/2007-3/2008. Does not represent vaccinations given through other channels such as employers, pharmacies, senior centers, etc.

Influenza vaccinations: percentage of total 2007-08 uptake by month, United States

NHIS* SDI** BRFSS***

Age Group: 19y-64y

Percent of Total Uptake

Aug Sept Oct Nov Dec Jan Feb Mar

0 5 10 15 20 25 30 35 40 45 50 55

CDC/NCHS, National Health Interview Survey, 2008 preliminary data. Estimates based on household interviews; sample of noninstitutionalized civilians, n=1,763 vaccinees. **Data collected from electronic medical claims processed by physicians on CMS-1500 forms, n=483K un-projected flu administrations, for 19y-64yr from 8/2007-3/2008. Does not represent vaccinations given through other channels such as employers, pharmacies, senior centers, etc. ***Nationwide all states, n=138,534 vaccinees.
Influenza vaccinations: percentage of total uptake by month, BRFSS, US

BRFSS 07-08*, BRFSS 08-09**
n’s 76,388, 4,500

*All states; interviews April – July  **41 states; interviews Jan & Feb

Influenza vaccinations: percentage of total uptake by month, U.S.

BRFSS 2008-09, SDI 2008-09
n’s 4,500, ~9.75M
**Summary & Conclusions-1**

- Vaccination uptake according to SDI, increased by 8% in 2008-09 compared to 2007-08; 84% of doses were administered by end of Nov; 95% by end of Dec.
- Monthly distribution of vaccination uptake was quite similar season to season with possibly a greater proportion in Sept and Oct during 2008-09.
- Hispanics were over-represented among vaccinees a lot in Aug, some in Jan; blacks some Dec & Jan, more in Feb.

**Summary & Conclusions-2**

- Physician-processed claims have similar pattern to self-report by month, slightly lower in Oct and higher in Nov and especially in Dec; shift to the right more pronounced among children.
- BRFSS showed very similar monthly vaccination distribution patterns as NHIS & SDI, and in 2007-08 compared to 2008-09.