



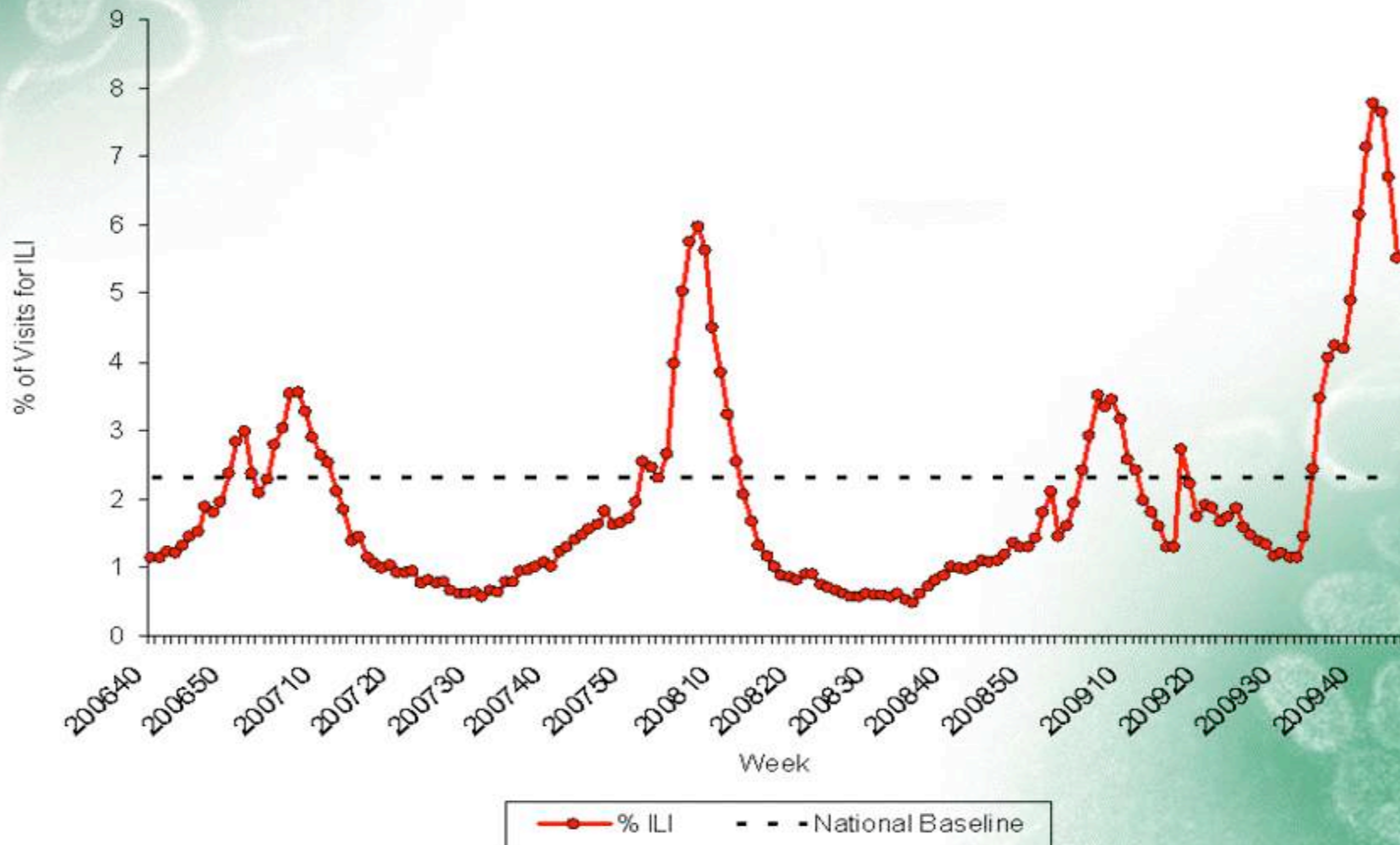
ILI Syndromic Surveillance

FLUVIEW



A Weekly Influenza Surveillance Report Prepared by the Influenza Division

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, October 1, 2006 – November 14, 2009



Race/ethnicity of adult respondents with influenza-like illness (ILI) in the U.S., Behavioral Risk Factor Surveillance System (BRFSS),

Sept 1- Sep 30, 2009

Race/ethnicity	ILI	Total	Weighted % ILI	Weighted (95% CI)
White, non-Hispanic	1026	22254	5.48	(4.87–6.10)
Black, non-Hispanic	121	2135	5.40	(3.68–7.13)
Hispanic	109	1934	3.83	(2.28–5.39)
Other race only, Non-Hispanic	74	1074	6.41	(3.77–9.05)
Multiracial, Non-Hispanic	43	435	13.2	(6.34–20.07)
Not asked or missing	18	310	4.12	(1.46–6.78)



Health care seeking behavior of adults respondents with ILI in the U.S., by race/ethnicity, BRFSS,

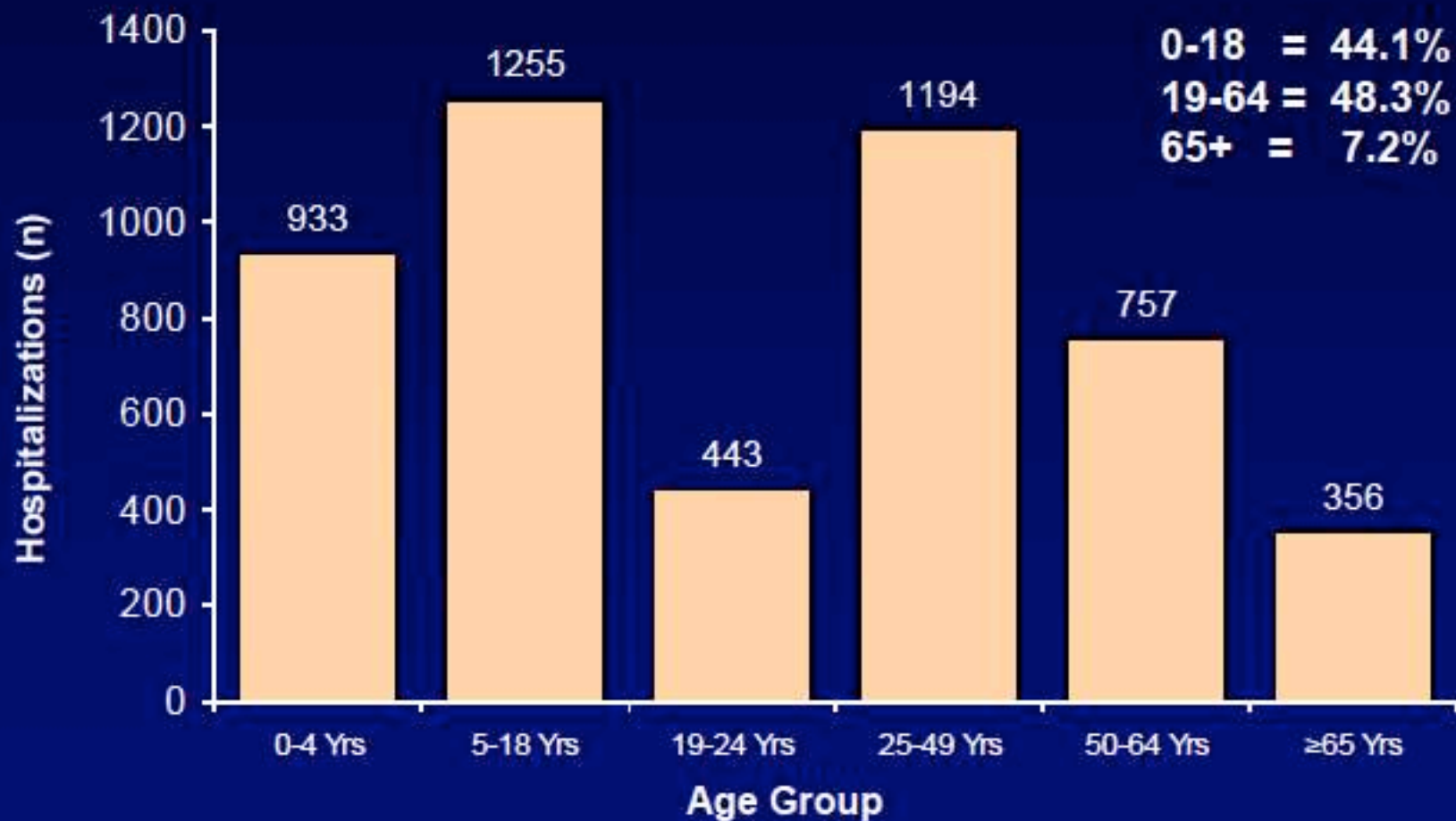
Sept 1- Sep 30

Race/Ethnicity	Sought medical care for ILI	Total	Weighted %Yes	Weighted (95% CI)
White, non-Hispanic	454	1026	41.4	(35.7–47.1)
Black, non-Hispanic	63	120	49.5	(33.3–65.7)
Hispanic	51	109	39.5	(20.6–58.4)
Other race only, non-Hispanic	35	74	40.0	(18.3–61.7)
Multiracial, non-Hispanic	24	43	48.5	(19.2–77.8)



Influenza Hospitalizations

Epidemiology/Surveillance
Lab-Confirmed Hospitalizations by Age Group through Week 40 (n=4,958)*
Influenza Week 40 – 16 OCT 2009



*Numbers are cumulative from start of MMWR week 35 (August 30, 2009)



EIP Influenza Hospitalization: Race/Ethnicity* by season, all ages, 2006-2009

Influenza Season					
Race/Ethnicity	Distribution†	2006-07 N=1279	2007-08 N=3930	2008-09+ N=1693	2009++ N=1476
White	63%	57%	65%	52%	40%
Black	16%	24%	21%	28%	35%
Asian/Pacific Islander	7%	4%	4%	3%	8%
Amer. Indian/ Alaska Native	1%	<1%	<1%	<1%	<1%
Hispanic	13%	15%	9%	15%	15%

9/22/09

*imputed race/ethnicity

+Oct 1, 2008 – April 14, 2009

++ Apr 15, 2009 – Aug 31, 2009

†Census 2008 data for catchment area as of 2007-08 to current season

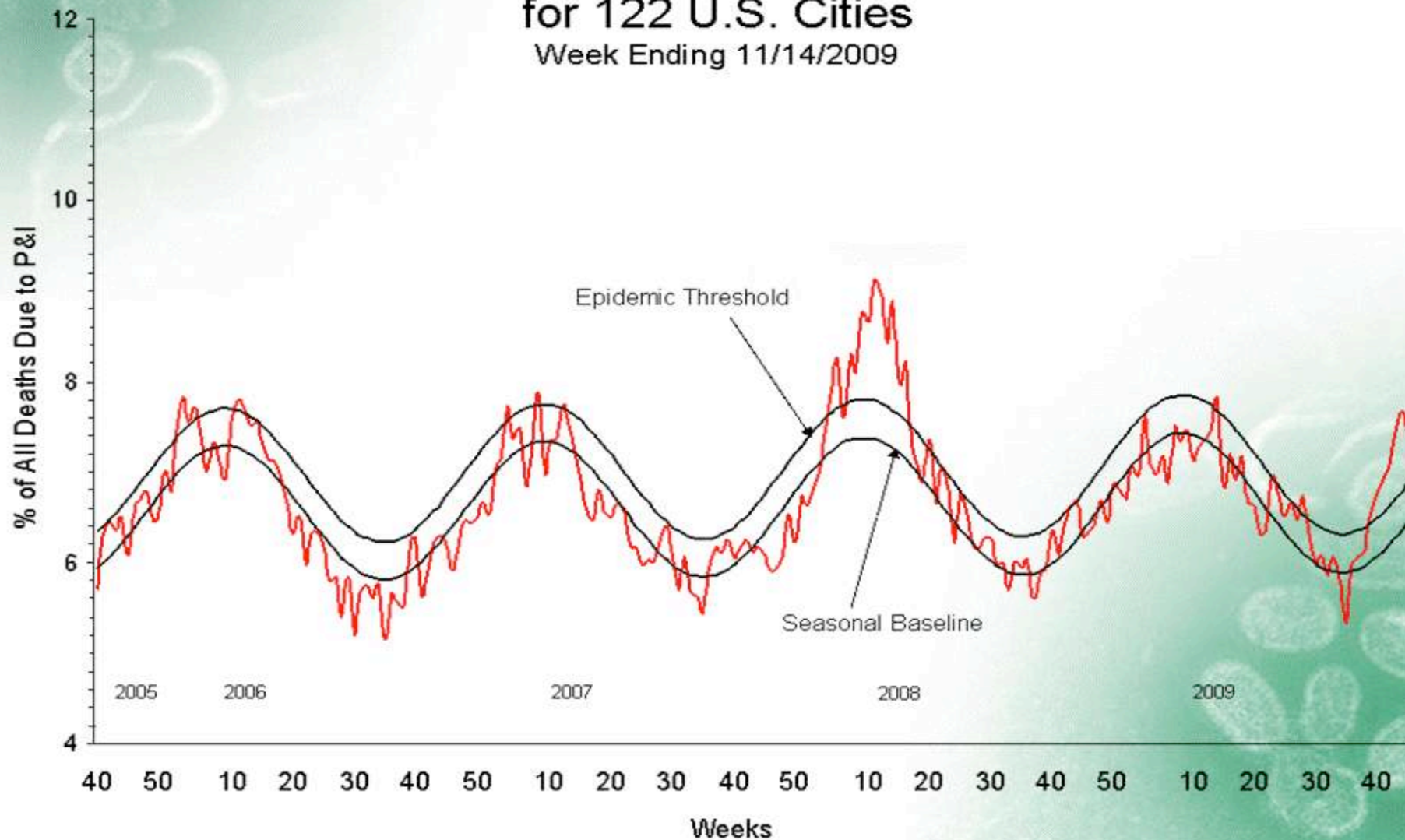
Preliminary



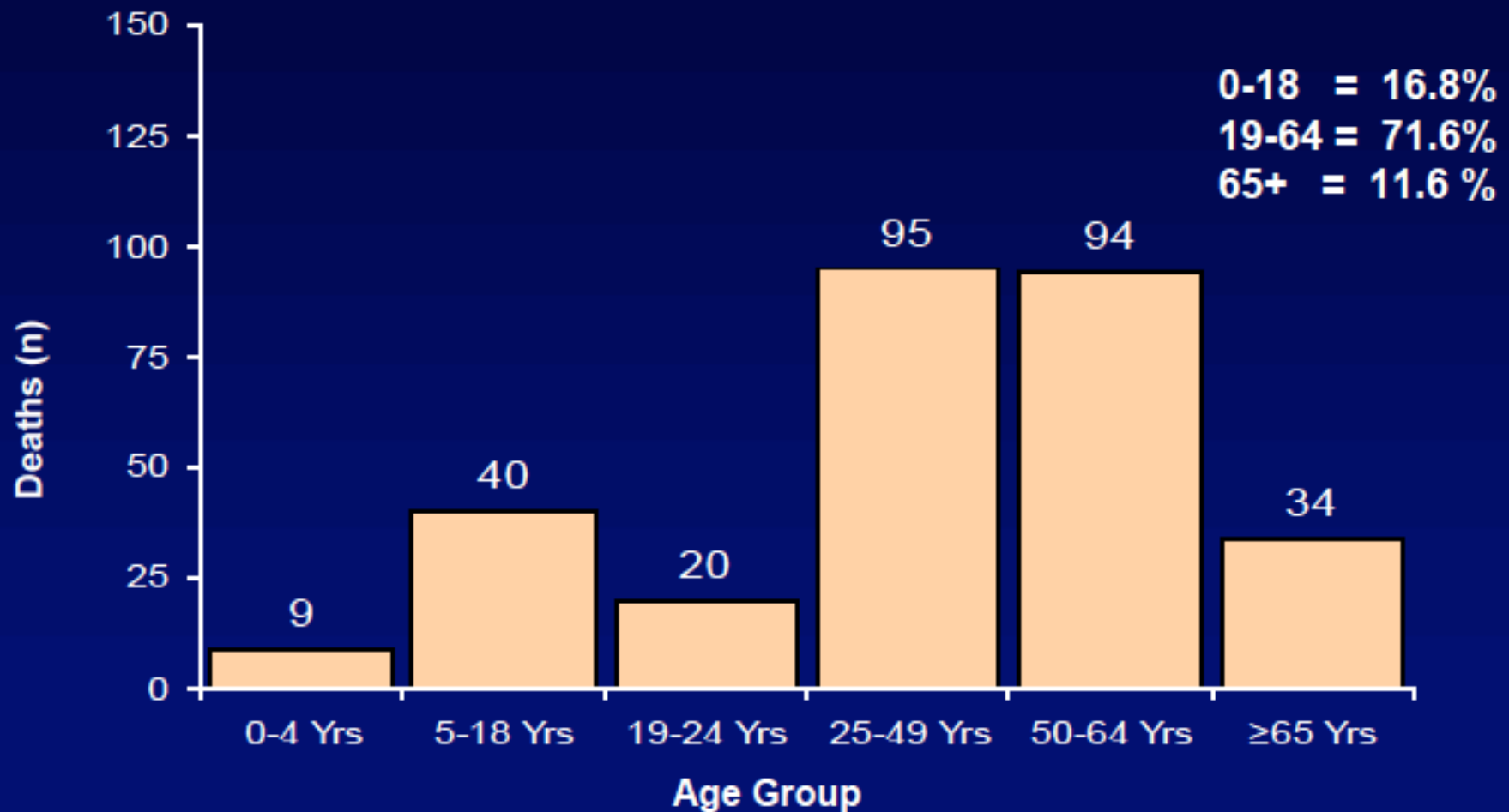


Influenza Mortality

Pneumonia and Influenza Mortality for 122 U.S. Cities Week Ending 11/14/2009



Epidemiology/Surveillance
Lab-Confirmed Deaths by Age Group through Week 40 (n=292*)
Influenza Week 40 – 16 OCT 2009



*Numbers are cumulative from start of MMWR week 35 (August 30, 2009)

Influenza Associated Pediatric Mortality

Distribution of laboratory-confirmed pediatric 2009 H1N1 and seasonal influenza deaths by race/ethnicity, 2009

	H1N1 deaths 4/14- 8/31/2009	H1N1 deaths 9/1- present	Seasonal Deaths
Hispanic – any race (15%)	17 (35%)	6 (21%)	18 (25%)
White (67%)	19 (40%)	7 (25%)	30 (42%)
Black (12%)	6 (13%)	9 (32%)	13 (18%)
Asian (4%)	2 (4%)	1 (4%)	5 (7%)
Alaska Native or American Indian (1%)	0	1 (4%)	1 (1%)
Native Hawaiian or Pacific Islander (0.14%)	0	0	2 (3%)
Unknown race or race/ethnicity	4 (8%)	4 (14%)	2 (3%)
Totals	48	28	71



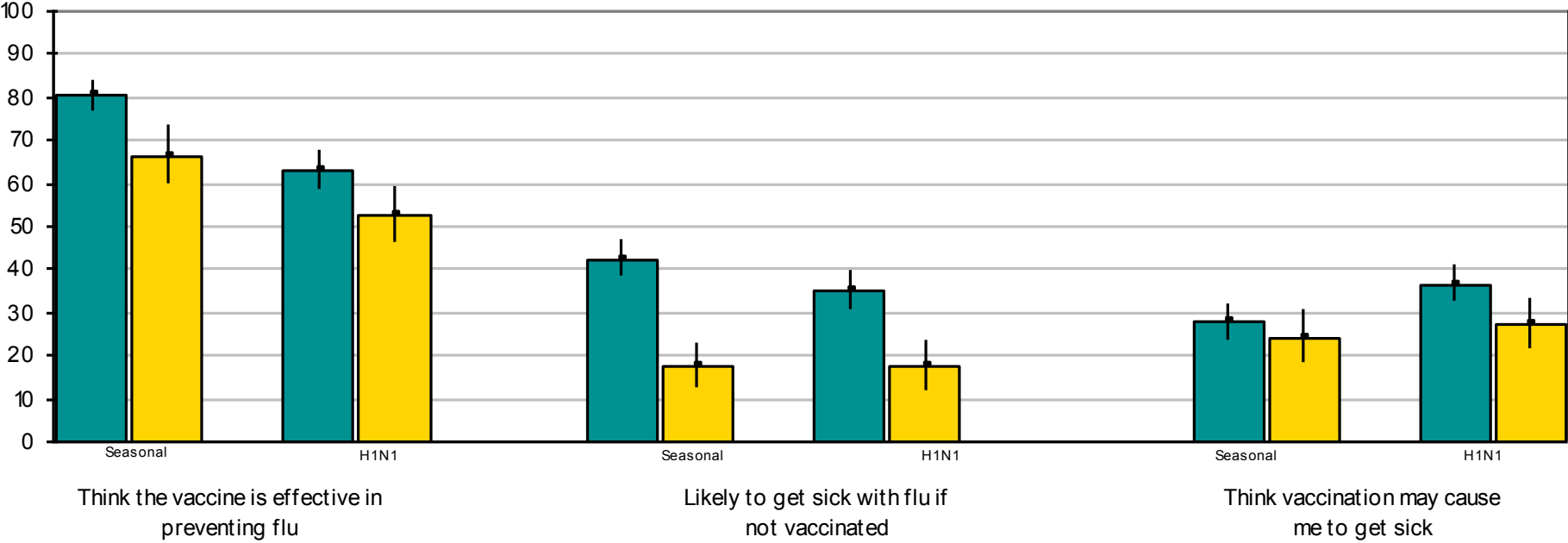


Influenza and Vaccine Knowledge, Attitudes and Behaviors

Opinions Regarding Influenza and Influenza Vaccine

NHFS, Interviews Conducted November 8-14, 2009

- Among all adults
- Among adults not intending to get vaccinated



American Public Views: Safety of H1N1 vs. Seasonal Flu Vaccine

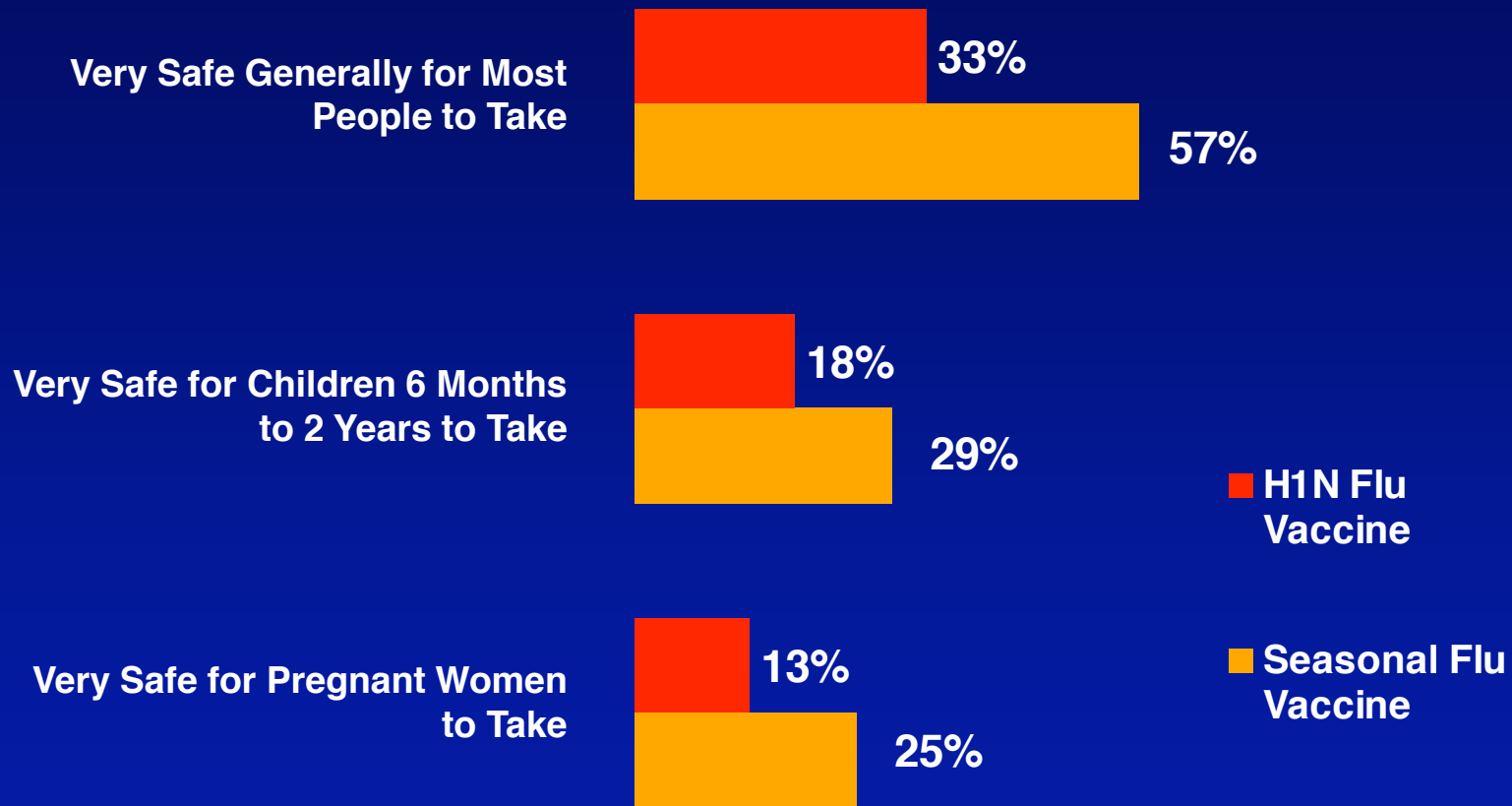
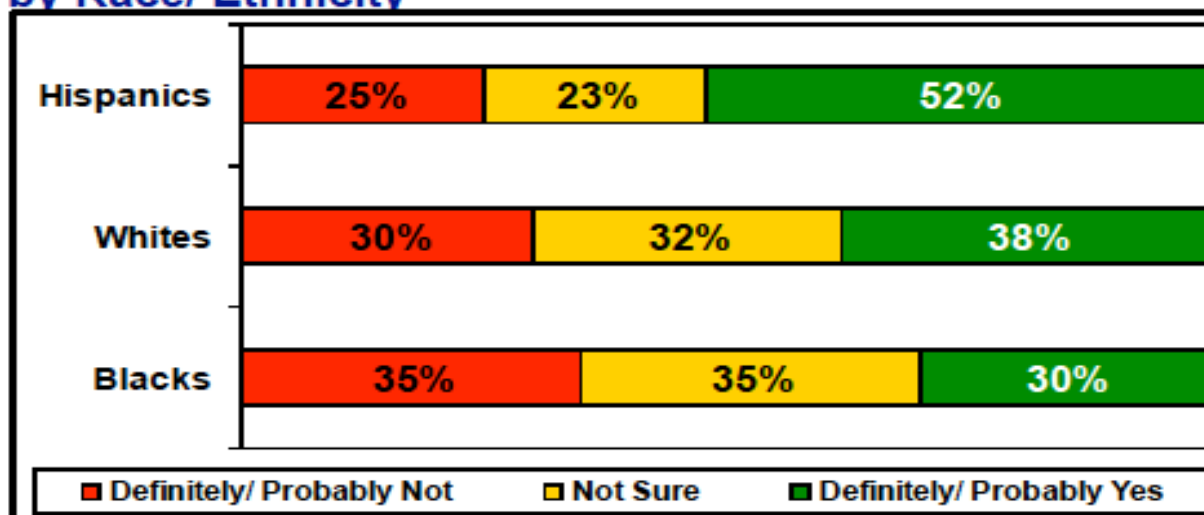


Figure 2. Planned H1N1 Flu Vaccination for Children, by Race/ Ethnicity

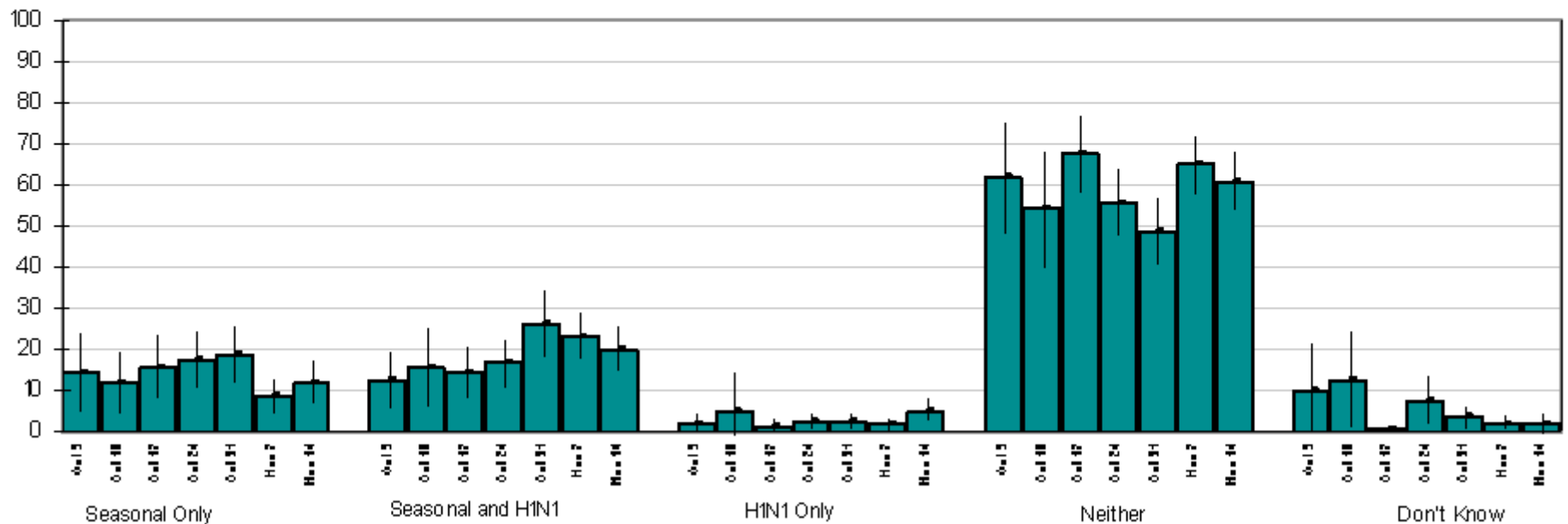


Source: C.S. Mott Children's Hospital National Poll on Children's Health, 2009



Recommendation for influenza vaccination of child by doctor or other health professional since September 2009

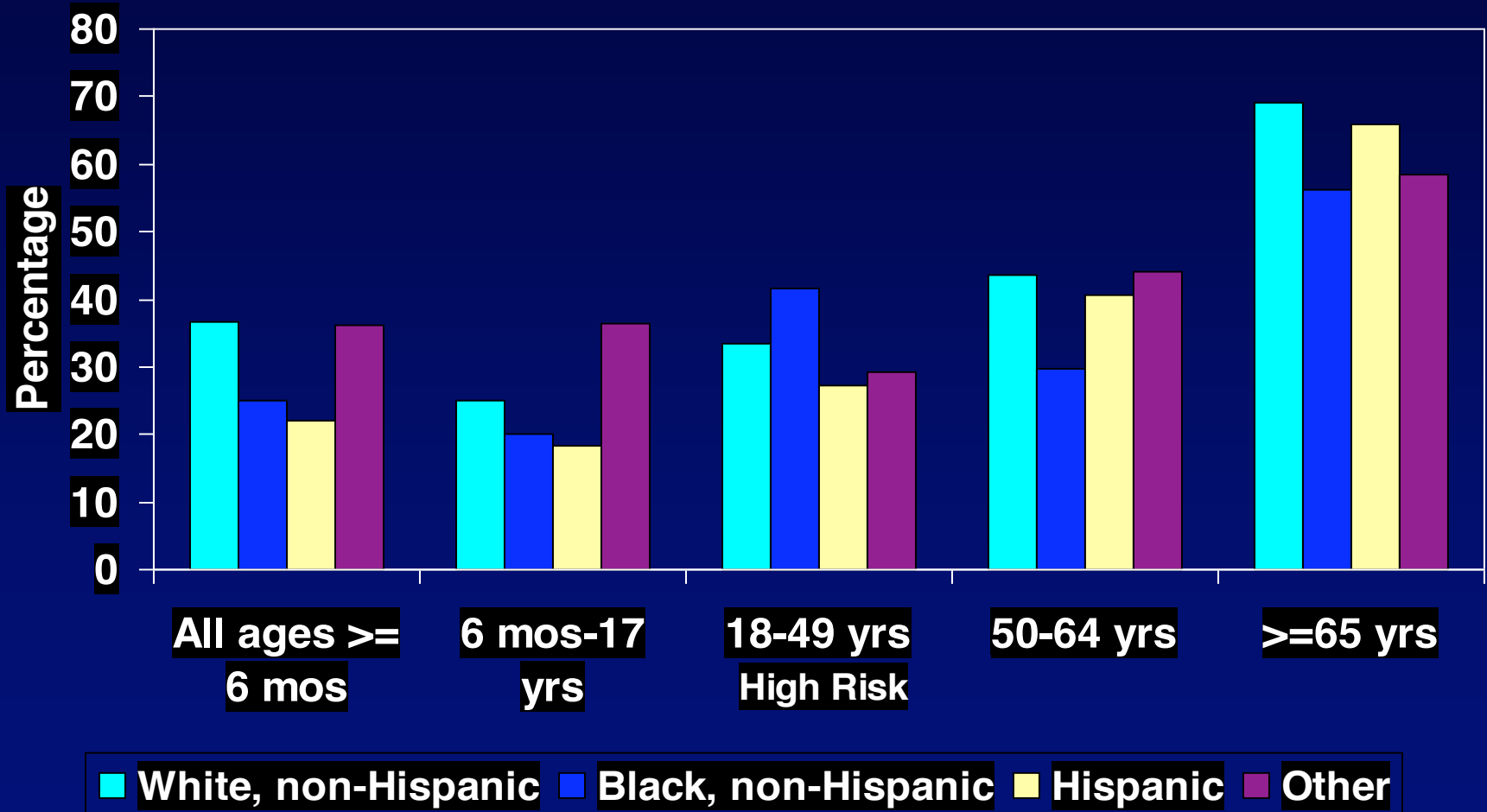
NHFS, Interviews Conducted September 28 - November 14, 2009





Influenza Vaccine Coverage

Influenza Vaccination Coverage Among Children & Adults, US, 2008-09 Influenza Season, BRFSS (January - February 2009)



Racial / Ethnic SEASONAL Cumulative Influenza Vaccination Coverage Among CHILDREN/TEENS

BRFSS Interviews Conducted October 1-31, 2009
n=2,972

Race/ Ethnicity	Sample Size	Weighted Coverage (%)	95% CI	Weighted Sample Size (million)
White	2,047	20.5	17.6, 23.7	17.3
Black	156	9.1*	4.7, 16.7	2.9
Hispanic	388	12.7*	8.6, 18.2	7.9
Other	229	20.6	12.9, 31.3	2.0
Total†	2,830	17.3	15.1, 19.8	30.1

*p<0.05 when compared to whites

†From 22 states. Excludes missing, don't know, and refused (142)

Note: BRFSS estimates underestimate vaccination occurring in October



H1N1 Vaccination Rates (%), NHFS Nov 8-14 by Race/Ethnicity and Target Groups

Race/Ethnicity	Initial Target	Limited Vaccine Subset	Total Population
White, non-Hispanic	12.7 (9.7, 15.7)	20.2 (13.9, 26.8)	8.3 (6.3, 10.3)
Other, non-Hispanic (e.g., Asian, AI/AN)	10.5 (4.2, 16.8)*	9.8 (2.2, 17.4)*	7.0 (2.9, 11.1)
Hispanic	5.4 (2.8, 8.4)	6.1 (0, 12.2)*	4.4 (2.1, 6.7)
Black, non-Hispanic	8.4 (3.1, 13.7)*	Not Available, unestimated due stratum constraints	5.9 (2.4, 9.4)

* Estimate may not be reliable, (CI half width/estimate) ≥ 0.6 or (CI half width) ≥ 10



SEASONAL Cumulative Influenza Vaccination Coverage among women (aged 18-49) by PREGNANCY STATUS BRFSS, Interviews Conducted October 1-31, 2009

Pregnant	Sample Size	Weighted Coverage	95% CI	Weighted Sample Size (million)
Yes	176	24.9%	15.8, 36.0	2.0
No	4,900	18.7%	16.8, 20.0	53.3
Total†	5,076	18.9%	17.1, 20.0	55.3

†Excludes missing, don't know, and refused

Note: BRFSS estimates underestimate vaccination occurring in October



Conclusion

- All race-ethnicities appear to acquire ILI and seek care for that ILI at a similar rate
- However,
 - African Americans comprise a greater proportion of H1N1 and seasonal influenza hospitalizations than their representation in the Emerging Infections Program (EIP) catchment area.
 - African Americans and Hispanics are overrepresented in the H1N1 and seasonal influenza deaths compared to their representation in the US
- African Americans and Hispanics are less likely to receive seasonal influenza vaccination than non-Hispanic whites
- Reduction of excess influenza morbidity and mortality in minority populations will require:
 - Elimination of potential structural barriers to vaccination access
 - Education and mobilization of minority communities in partnership with health care providers, community and faith-based organizations, educational institutions and the media
 - Additional investigation of factors contributing to the excess morbidity/mortality

Resources

- <http://www.cdc.gov/omhd/Highlights/2007/HAug07.htm>
- <http://www.cdc.gov/h1n1flu/freeresources.htm>
- <http://www.flu.gov/professional/community/cfboguidance.html>

Print Materials

- Posters, flyers and print ads targeting African American, Hispanic and Native American audiences
- Available for download from CDC website
- Vaccine information statements available in 26 languages

