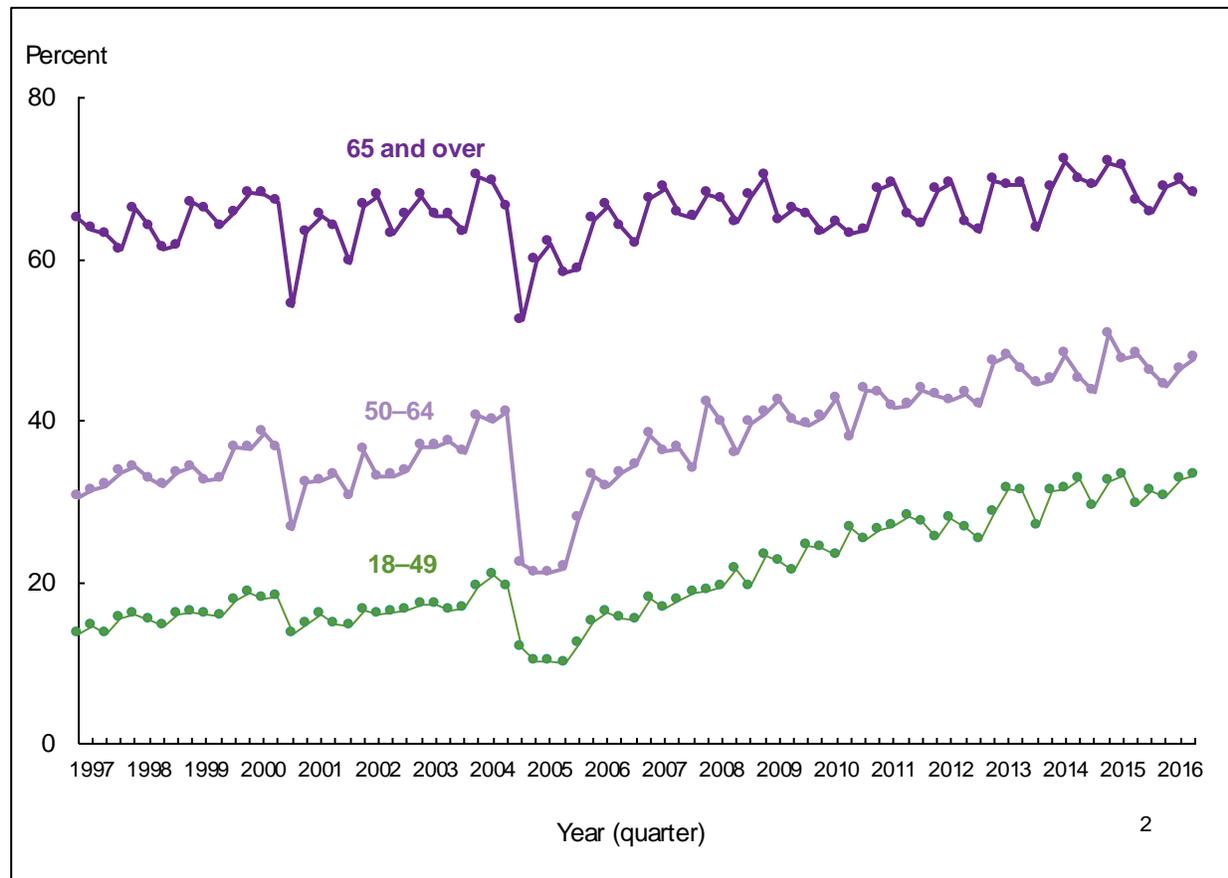


Receipt of influenza vaccination

Figure 4.1. Percentage of adults aged 18 and over who received an influenza vaccination during the past 12 months, by age group and quarter: United States, 1997–2016



NOTES: Data are based on household interviews of a sample of the civilian noninstitutionalized population. National Health Interview Survey (NHIS) questions related to influenza vaccination have changed since 1997. Starting in 1997, respondents were asked if they received a flu shot during the past 12 months. Beginning in 2003, respondents were also asked if they received a flu vaccine sprayed in their nose during the past 12 months. In August 2010, questions were modified to reflect that, for the first time, the widely available influenza vaccine included protection against both seasonal and H1N1 types of influenza. NHIS Early Release influenza vaccination estimates have changed since 1997. Starting in 1997, Early Release influenza vaccination estimates covered receipt of an influenza shot only. Starting in 2005, Early Release influenza vaccination estimates covered seasonal influenza shot or seasonal intranasal influenza vaccination. Estimates based on data collected in quarters three and four of 2010 and quarters one and two of 2011 could be affected, to an unknown extent, by reports of H1N1 immunization without seasonal flu immunization for the period when the two were administered separately (October 2009–May 2010). Prevalence of influenza vaccination during the past 12 months is different from season-specific coverage (see http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6204a1.htm?s_cid=ss6204a1_w; estimates available from: <http://www.cdc.gov/flu/fluview>). Advisory Committee on Immunization Practices recommendations regarding who should receive an influenza vaccination have changed over the years, and changes in coverage estimates may reflect changes in recommendations (4–6). An influenza vaccine shortage occurred during the 2004–2005 influenza season (4). Delays in the availability of influenza shots also occurred in fall 2000 and, to a lesser extent, in fall 2001 (4–7). The analyses exclude those with unknown influenza vaccination status (about 3% of respondents each year). See [Technical Notes](#) for more details.

DATA SOURCE: NCHS, National Health Interview Survey, 1997–2016, Sample Adult Core component.

- In the fourth quarter of 2016, the percentage of adults who received an influenza vaccination during the past 12 months by age group was 62.3% for adults aged 65 and over, 42.2% for those aged 50–64, and 30.6% for those aged 18–49.
- The percentage of adults who received an influenza vaccination in fourth quarter of 2016 was lower than but not significantly different from the fourth quarter of 2015, for adults in all age groups.

Table 4.1a. Percentage of adults aged 50–64 who received an influenza vaccination during the past 12 months, by sex: United States, 1997–2016

Year	Total	Men	Women
	Percent (95% confidence interval)		
1997	31.9 (30.5–33.3)	28.0 (26.1–29.9)	35.5 (33.6–37.4)
1998	33.1 (31.7–34.5)	29.0 (27.0–31.0)	37.0 (35.1–38.9)
1999	34.1 (32.8–35.4)	30.5 (28.6–32.4)	37.4 (35.5–39.3)
2000	34.6 (33.1–36.1)	31.9 (29.9–33.9)	37.2 (35.2–39.1)
2001	32.2 (30.9–33.5)	30.3 (28.3–32.2)	34.0 (32.2–35.8)
2002	34.0 (32.7–35.3)	30.7 (28.8–32.5)	37.2 (35.4–38.9)
2003	36.8 (35.4–38.2)	34.5 (32.6–36.3)	38.9 (37.0–40.9)
2004	35.9 (34.6–37.3)	33.3 (31.3–35.3)	38.5 (36.7–40.3)
2005	23.0 (21.93–24.10)	19.7 (18.11–21.36)	26.1 (24.61–27.52)
2006	33.2 (31.59–34.82)	29.9 (27.58–32.18)	36.3 (34.23–38.36)
2007	36.2 (34.56–37.93)	33.0 (30.94–35.05)	39.3 (36.93–41.64)
2008	39.4 (37.79–41.10)	36.3 (34.04–38.56)	42.4 (40.18–44.68)
2009	40.7 (39.31–42.07)	38.3 (36.23–40.30)	43.0 (40.92–45.03)
2010	41.2 (39.73–42.66)	37.5 (35.41–39.56)	44.7 (42.78–46.56)
2011	42.7 (41.31–44.08)	39.0 (36.95–41.00)	46.2 (44.23–48.16)
2012	42.7 (41.44–43.99)	38.5 (36.87–40.11)	46.7 (44.94–48.50)
2013	46.5 (45.05–47.97)	43.1 (40.92–45.35)	49.7 (47.88–51.43)
2014	45.5 (43.91–47.03)	41.0 (38.65–43.38)	49.6 (47.70–51.59)
2015	48.1 (46.46–49.79)	45.3 (43.12–47.50)	50.8 (48.59–52.92)
2016	45.2 (43.88–46.47)	42.0 (40.16–43.77)	48.2 (46.30–50.09)

See notes at end of table.

Table 4.1b. Percentage of adults aged 65 and over who received an influenza vaccination during the past 12 months, by sex: United States, 1997–2016

Year	Total	Total	Men	Women
	Crude percent (95% confidence interval)	Age-adjusted percent (95% confidence interval) ¹	Percent (95% confidence interval)	Percent (95% confidence interval)
1997	63.2 (61.9–64.6)	63.1 (61.7–64.4)	64.8 (62.5–67.1)	62.1 (60.5–63.7)
1998	63.3 (61.9–64.7)	63.3 (61.9–64.6)	63.7 (61.5–65.9)	63.0 (61.2–64.8)
1999	65.7 (64.3–67.2)	65.1 (63.6–66.5)	67.2 (65.0–69.4)	64.6 (62.7–66.5)
2000	64.4 (63.0–65.9)	64.6 (63.2–66.0)	66.0 (63.8–68.3)	63.3 (61.6–65.0)
2001	63.1 (61.7–64.5)	63.2 (61.8–64.6)	64.8 (62.5–67.1)	61.8 (60.1–63.5)
2002	65.7 (64.3–67.2)	65.9 (64.5–67.3)	67.1 (64.7–69.5)	64.7 (62.8–66.6)
2003	65.5 (64.1–66.9)	65.6 (64.2–66.9)	66.0 (63.9–68.1)	65.1 (63.2–67.0)
2004	64.6 (63.2–66.1)	64.7 (63.2–66.1)	64.1 (61.9–66.3)	65.0 (63.3–66.7)
2005	59.7 (58.16–61.15)	59.7 (58.24–61.23)	58.9 (56.64–61.17)	60.2 (58.22–62.20)
2006	64.3 (62.39–66.19)	64.4 (62.51–66.32)	64.7 (62.04–67.43)	63.9 (61.65–66.24)
2007	66.7 (64.90–68.59)	66.8 (65.00–68.68)	66.7 (64.06–69.31)	66.8 (64.62–68.96)
2008	66.9 (65.08–68.80)	67.1 (65.31–68.89)	65.5 (62.74–68.33)	68.0 (65.94–70.07)
2009	66.7 (64.99–68.48)	67.0 (65.32–68.69)	67.3 (64.82–69.82)	66.3 (64.11–68.46)
2010	63.6 (61.99–65.29)	63.9 (62.26–65.50)	63.1 (60.76–65.52)	64.0 (61.79–66.26)
2011	67.0 (65.45–68.50)	67.2 (65.74–68.75)	66.3 (64.12–68.53)	67.5 (65.68–69.30)
2012	66.5 (64.98–67.96)	66.9 (65.46–68.38)	65.2 (63.17–67.29)	67.4 (65.56–69.34)
2013	67.9 (66.38–69.48)	68.4 (66.89–69.92)	66.4 (63.89–68.87)	69.2 (67.42–70.88)
2014	70.0 (68.62–71.38)	70.5 (69.09–71.86)	70.1 (67.94–72.31)	69.9 (68.23–71.59)
2015	69.1 (67.79–70.33)	69.4 (68.14–70.63)	70.4 (68.66–72.18)	68.0 (66.16–69.75)
2016	67.2 (65.77–68.65)	67.7 (66.33–69.17)	66.7 (64.72–68.75)	67.6 (65.97–69.21)

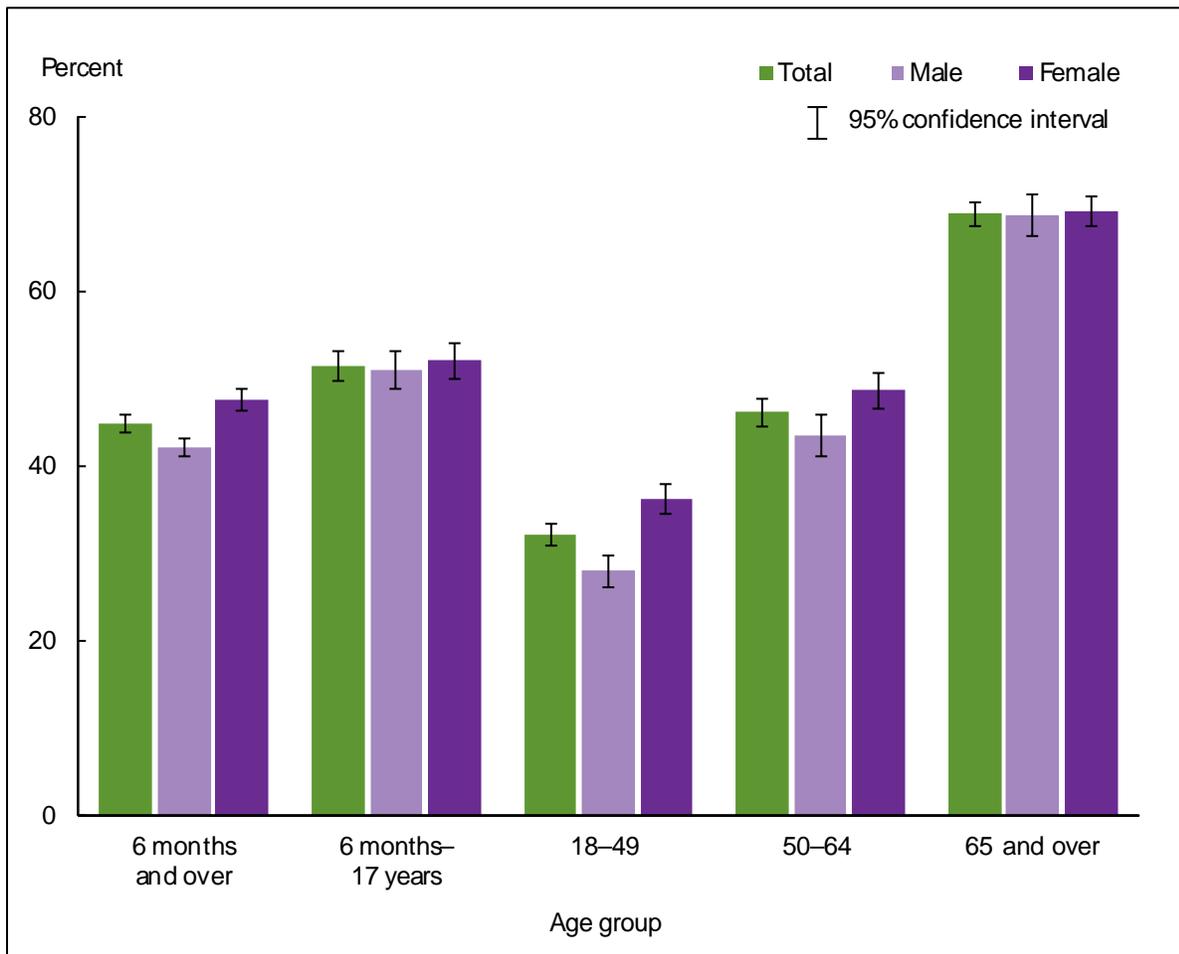
¹Estimates are age-adjusted using the projected 2000 U.S. population as the standard population and two age groups: 65–74 and 75 and over.

NOTES: Data are based on household interviews of a sample of the civilian noninstitutionalized population. National Health Interview Survey (NHIS) questions related to influenza vaccination have changed since 1997. Starting in 1997, respondents were asked if they received a flu shot during the past 12 months. Beginning in 2003, respondents were also asked if they received a flu vaccine sprayed in their nose during the past 12 months. In August 2010, questions were modified to reflect that, for the first time, the widely available influenza vaccine included protection against both seasonal and H1N1 types of influenza. NHIS Early Release influenza vaccination estimates have changed since 1997. Starting in 1997, Early Release influenza vaccination estimates covered receipt of an influenza shot only. Starting in 2005, Early Release influenza vaccination estimates covered the seasonal influenza shot or seasonal intranasal influenza vaccination. Estimates based on data collected in quarters three and four of 2010 and quarters one and two of 2011 could be affected, to an unknown extent, by reports of H1N1 immunization without seasonal flu immunization for the period when the two were administered separately (October 2009–May 2010). Prevalence of influenza vaccination during the past 12 months is different from season-specific coverage (see http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6204a1.htm?s_cid=ss6204a1_w; estimates available from: <http://www.cdc.gov/flu/fluview>). Advisory Committee on Immunization Practices recommendations regarding who should receive an influenza vaccination have changed over the years, and changes in coverage estimates may reflect changes in recommendations (4–6). An influenza vaccine shortage occurred during the 2004–2005 influenza season (4). Delays in the availability of influenza shots also occurred in fall 2000 and, to a lesser extent, in fall 2001 (4–7). The analyses exclude those with unknown influenza vaccination status (about 3% of respondents each year). See [Technical Notes](#) for more details.

DATA SOURCE: NCHS, National Health Interview Survey, 1997–2016, Sample Adult Core component.

- For 2016, the percentage of adults aged 50–64 who received an influenza vaccination during the past 12 months was 45.2% (Table 4.1a). This estimate was lower than the 2015 estimate of 48.1%. For this age group, the percentage of adults who received an influenza vaccination during the past 12 months generally increased from 1997 to 2015.
- For 2016, the percentage of adults aged 65 and over who received an influenza vaccination during the past 12 months was 67.2%, which was lower than, but not significantly different from, the 2015 estimate of 69.1% (Table 4.1b). For this age group, the percentage of adults who received an influenza vaccination during the past 12 months increased from 1997 to 2015.

Figure 4.2. Percentage of persons who received an influenza vaccination during the past 12 months, by age group and sex: United States, 2016

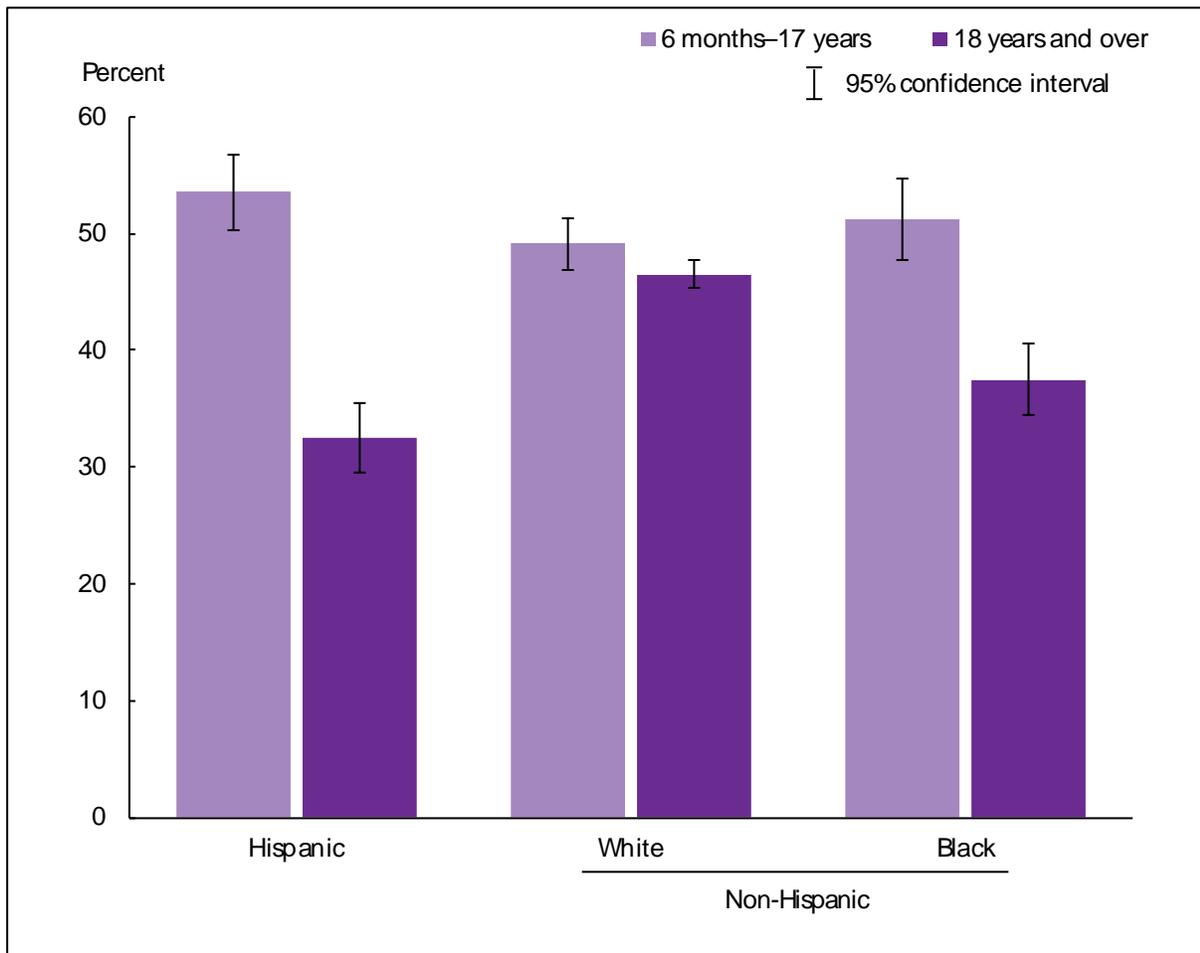


NOTES: Data are based on household interviews of a sample of the civilian noninstitutionalized population. Respondents were asked in separate questions if they received a flu shot during the past 12 months or a flu vaccine sprayed in their nose during the past 12 months. For children aged 6 months–8 years, who require two doses of vaccine to be fully vaccinated if they have not previously received seasonal influenza vaccination, these questions do not indicate whether the vaccination was a child's first or second dose. In August 2010, National Health Interview Survey influenza vaccination questions were modified to reflect that, for the first time, the widely available influenza vaccine included protection against both seasonal and H1N1 types of influenza. When interpreting influenza vaccination estimates, changes made to the influenza vaccination questions noted above should be taken into account. Prevalence of influenza vaccination during the past 12 months is different from season-specific coverage (see http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6204a1.htm?s_cid=ss6204a1_w; estimates available from: <http://www.cdc.gov/flu/fluview>). Advisory Committee on Immunization Practices recommendations regarding who should receive an influenza vaccination have changed over the years, and changes in coverage estimates may reflect changes in recommendations (5,8). The analyses exclude the 2.2% of persons with unknown influenza vaccination status. See [Technical Notes](#) for more details.

DATA SOURCE: NCHS, National Health Interview Survey, 2016, combined Sample Adult and Sample Child Core components.

- For both sexes combined, the percentage of persons who received an influenza vaccination during the past 12 months was highest among persons aged 65 and over (67.2%) and lowest among persons aged 18–49 (31.8%). This pattern held true for males and females.
- For persons aged 6 months and over and for adults aged 18–49 and 50–64, females were more likely than males to have received an influenza vaccination during the past 12 months.

Figure 4.3. Percentage of persons aged 6 months and over who received an influenza vaccination during the past 12 months, by age group and race and ethnicity: United States, 2016



NOTES: Data are based on household interviews of a sample of the civilian noninstitutionalized population. Respondents were asked in separate questions if they received a flu shot during the past 12 months or a flu vaccine sprayed in their nose during the past 12 months. For children aged 6 months–8 years, who require two doses of vaccine to be fully vaccinated if they have not previously received seasonal influenza vaccination, these questions do not indicate whether the vaccination was a child's first or second dose. In August 2010, questions were modified to reflect that, for the first time, the widely available influenza vaccine included protection against both seasonal and H1N1 types of influenza. When interpreting influenza vaccination estimates, changes made to the influenza vaccination questions noted above should be taken into account. Prevalence of influenza vaccination during the past 12 months is different from season-specific coverage (see http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6204a1.htm?s_cid=ss6204a1_w; estimates available from: <http://www.cdc.gov/flu/fluview>). Advisory Committee on Immunization Practices recommendations regarding who should receive an influenza vaccination have changed over the years, and changes in coverage estimates may reflect changes in recommendations (5). The analyses exclude the 2.2% of persons with unknown influenza vaccination status. See [Technical Notes](#) for more details.

DATA SOURCE: NCHS, National Health Interview Survey, 2016, combined Sample Adult and Sample Child Core components.

- For children aged 6 months–17 years, the percentage by race and ethnicity who received an influenza vaccination during the past 12 months was 52.2% for Hispanic children, 48.0% for non-Hispanic white children, and 48.0% for non-Hispanic black children.
- Hispanic children aged 6 months–17 years were more likely to have received an influenza vaccination during the past 12 months than non-Hispanic white children aged 6 months–17 years.
- For adults aged 18 and over, the percentage who received an influenza vaccination during the past 12 months was 32.6% for Hispanic adults, 45.5% for non-Hispanic white adults, and 35.8% for non-Hispanic black adults.
- Non-Hispanic white adults were more likely to have received an influenza vaccination than non-Hispanic black adults and Hispanic adults.

Data tables for Figures 4.1–4.3:

Data table for Figure 4.1. Percentage of adults aged 18 and over who received an influenza vaccination during the past 12 months, by age group and quarter: United States, 1997–2016

Year and quarter	18–49	50–64	65 and over
	Percent (95% confidence interval)		
1997, quarter 1	13.6 (12.5–14.6)	30.5 (27.8–33.2)	65.0 (62.3–67.6)
1997, quarter 2	14.5 (13.4–15.5)	31.3 (28.7–34.0)	63.7 (61.1–66.2)
1997, quarter 3	13.6 (12.6–14.6)	32.0 (29.3–34.6)	63.1 (60.3–65.9)
1997, quarter 4	15.6 (14.5–16.7)	33.6 (31.1–36.2)	61.2 (58.7–63.8)
1998, quarter 1	16.1 (14.8–17.3)	34.2 (31.3–37.1)	66.3 (63.2–69.4)
1998, quarter 2	15.3 (14.1–16.5)	32.8 (30.1–35.5)	64.0 (61.3–66.8)
1998, quarter 3	14.5 (13.3–15.6)	32.0 (29.3–34.6)	61.3 (58.5–64.0)
1998, quarter 4	16.0 (14.8–17.2)	33.5 (30.8–36.1)	61.6 (58.7–64.5)
1999, quarter 1	16.3 (14.8–17.7)	34.2 (31.1–37.3)	67.0 (64.0–70.1)
1999, quarter 2	16.0 (14.7–17.3)	32.6 (29.8–35.4)	66.1 (63.4–68.8)
1999, quarter 3	15.8 (14.5–17.1)	32.8 (30.1–35.5)	64.1 (61.2–67.0)
1999, quarter 4	17.6 (16.2–18.9)	36.7 (34.2–39.2)	65.7 (62.7–68.6)
2000, quarter 1	18.6 (17.2–19.9)	36.6 (33.7–39.4)	68.2 (65.3–71.0)
2000, quarter 2	18.0 (16.7–19.4)	38.5 (35.7–41.4)	68.1 (65.6–70.7)
2000, quarter 3	18.2 (16.9–19.4)	36.6 (33.7–39.5)	67.1 (64.4–69.8)
2000, quarter 4	13.6 (12.4–14.8)	26.6 (24.2–29.0)	54.3 (51.6–57.1)
2001, quarter 1	14.7 (13.4–16.0)	32.3 (29.6–35.0)	63.3 (60.2–66.3)
2001, quarter 2	15.9 (14.7–17.1)	32.6 (30.1–35.1)	65.4 (62.8–68.0)
2001, quarter 3	14.9 (13.9–15.9)	33.3 (30.7–35.8)	64.0 (61.1–66.8)
2001, quarter 4	14.5 (13.6–15.9)	30.6 (28.0–33.1)	59.6 (56.7–62.4)
2002, quarter 1	16.4 (15.2–17.7)	36.3 (33.6–38.9)	66.6 (63.8–69.4)
2002, quarter 2	16.0 (14.8–17.2)	33.0 (30.5–35.5)	67.8 (65.3–70.3)
2002, quarter 3	16.2 (14.9–17.5)	33.1 (30.6–35.6)	63.1 (60.5–65.8)
2002, quarter 4	16.4 (15.1–17.8)	33.8 (31.0–36.6)	65.5 (62.4–68.6)
2003, quarter 1	17.1 (15.7–18.4)	36.8 (34.2–39.4)	67.8 (65.0–70.6)
2003, quarter 2	17.2 (15.8–18.6)	36.8 (33.9–39.7)	65.4 (62.6–68.3)
2003, quarter 3	16.4 (15.2–17.6)	37.4 (34.9–39.9)	65.4 (62.8–67.9)
2003, quarter 4	16.7 (15.2–18.1)	36.1 (33.3–39.0)	63.3 (60.1–66.5)
2004, quarter 1	19.3 (17.9–20.8)	40.6 (38.0–43.3)	70.3 (67.5–73.0)
2004, quarter 2	20.9 (19.1–22.6)	40.0 (37.1–43.0)	69.5 (66.7–72.3)
2004, quarter 3	19.4 (18.2–20.7)	41.0 (38.4–43.6)	66.4 (63.6–69.2)
2004, quarter 4	12.0 (10.9–13.1)	22.3 (20.2–24.5)	52.4 (49.5–55.4)
2005, quarter 1	10.2 (9.03–11.41)	21.2 (19.05–23.42)	59.8 (56.66–62.90)
2005, quarter 2	10.3 (9.25–11.37)	21.1 (19.05–23.19)	62.0 (59.02–64.91)
2005, quarter 3	10.0 (9.03–11.03)	21.8 (19.64–24.01)	58.2 (55.42–60.97)
2005, quarter 4	12.4 (11.28–13.51)	27.8 (25.47–30.19)	58.7 (55.68–61.71)

See notes at end of table.

Data table for Figure 4.1. Percentage of adults aged 18 and over who received an influenza vaccination during the past 12 months, by age group and quarter: United States, 1997–2016 (Cont.)

Year and quarter	18–49	50–64	65 and over
	Percent (95% confidence interval)		
2006, quarter 1	15.0 (13.69–16.36)	33.1 (29.95–36.20)	64.9 (61.65–68.15)
2006, quarter 2	16.2 (14.78–17.68)	31.8 (29.05–34.50)	66.6 (63.60–69.51)
2006, quarter 3	15.5 (13.56–17.47)	33.5 (29.45–37.51)	63.9 (58.90–68.84)
2006, quarter 4	15.4 (14.07–16.82)	34.5 (31.81–37.11)	61.9 (58.72–65.00)
2007, quarter 1	18.0 (16.36–19.63)	38.3 (35.28–41.39)	67.5 (64.47–70.62)
2007, quarter 2	16.7 (15.07–18.31)	36.2 (33.37–39.03)	68.8 (65.62–71.91)
2007, quarter 3	17.6 (15.47–19.74)	36.5 (32.10–40.95)	65.6 (60.90–70.39)
2007, quarter 4	18.7 (17.11–20.38)	34.0 (31.14–36.79)	65.1 (62.17–68.02)
2008, quarter 1	19.0 (17.41–20.56)	42.3 (39.12–45.57)	68.0 (64.78–71.21)
2008, quarter 2	19.5 (17.87–21.08)	39.8 (37.01–42.57)	67.4 (64.60–70.20)
2008, quarter 3	21.6 (19.95–23.26)	36.0 (33.10–38.86)	64.5 (61.09–68.00)
2008, quarter 4	19.4 (17.29–21.60)	39.7 (35.45–43.92)	67.8 (63.70–71.91)
2009, quarter 1	23.3 (20.81–25.78)	40.9 (37.05–44.67)	70.3 (66.08–74.59)
2009, quarter 2	22.5 (20.92–24.06)	42.5 (40.09–44.93)	64.8 (62.04–67.55)
2009, quarter 3	21.4 (19.81–22.98)	40.0 (37.13–42.82)	66.3 (63.03–69.48)
2009, quarter 4	24.5 (23.06–25.93)	39.5 (37.24–41.75)	65.5 (62.96–68.03)
2010, quarter 1	24.3 (22.45–26.17)	40.4 (37.81–43.05)	63.3 (60.51–66.04)
2010, quarter 2	23.3 (21.56–25.02)	42.7 (39.65–45.74)	64.6 (61.74–67.39)
2010, quarter 3	26.7 (24.81–28.64)	37.9 (35.02–40.69)	63.1 (59.87–66.39)
2010, quarter 4	25.1 (23.24–27.04)	43.8 (40.80–46.82)	63.6 (60.19–66.99)
2011, quarter 1	26.4 (24.86–27.93)	43.4 (40.61–46.17)	68.7 (66.01–71.37)
2011, quarter 2	26.9 (25.32–28.46)	41.7 (38.97–44.39)	69.4 (67.00–71.78)
2011, quarter 3	28.2 (26.47–29.87)	41.9 (39.23–44.57)	65.5 (62.59–68.50)
2011, quarter 4	27.5 (25.48–29.47)	43.8 (41.26–46.32)	64.3 (61.52–67.14)
2012, quarter 1	25.5 (23.78–27.25)	43.1 (40.28–46.00)	68.6 (65.62–71.63)
2012, quarter 2	27.9 (26.16–29.55)	42.5 (39.69–45.21)	69.4 (66.84–72.03)
2012, quarter 3	26.6 (24.68–28.54)	43.3 (40.95–45.73)	64.6 (61.86–67.32)
2012, quarter 4	25.2 (23.49–26.84)	41.9 (39.03–44.78)	63.4 (60.28–66.44)
2013, quarter 1	28.7 (26.90–30.51)	47.2 (44.43–49.88)	69.8 (66.84–72.70)
2013, quarter 2	31.5 (29.65–33.44)	48.1 (45.22–50.95)	69.1 (66.21–71.97)
2013, quarter 3	31.2 (29.45–32.96)	46.2 (43.58–48.90)	69.3 (66.30–72.20)
2013, quarter 4	27.0 (25.21–28.71)	44.6 (41.64–47.54)	63.7 (60.59–66.77)
2014, quarter 1	31.2 (29.29–33.06)	45.0 (42.03–47.95)	68.8 (65.96–71.63)
2014, quarter 2	31.6 (29.55–33.72)	48.2 (45.02–51.40)	72.2 (69.54–74.86)
2014, quarter 3	32.7 (30.64–34.67)	45.1 (42.11–48.11)	69.9 (67.35–72.48)
2014, quarter 4	29.3 (27.66–30.96)	43.6 (40.90–46.26)	69.1 (66.38–71.85)
2015, quarter 1	32.5 (30.48–34.43)	50.7 (47.82–53.52)	71.9 (69.48–74.34)
2015, quarter 2	33.3 (31.49–35.03)	47.6 (44.68–50.47)	71.4 (68.76–74.13)
2015, quarter 3	29.7 (27.83–31.62)	48.2 (45.07–51.38)	67.2 (64.35–69.96)
2015, quarter 4	31.2 (28.84–33.52)	46.0 (43.07–48.90)	65.8 (63.05–68.60)
2016, quarter 1	30.5 (28.28–32.69)	44.3 (41.52–47.17)	68.9 (66.52–71.24)

See notes at end of table.

Data table for Figure 4.1. Percentage of adults aged 18 and over who received an influenza vaccination during the past 12 months, by age group and quarter: United States, 1997–2016 (Cont.)

Year and quarter	18–49	50–64	65 and over
	Percent (95% confidence interval)		
2016, quarter 2	32.7 (31.07–34.43)	46.4 (43.37–49.52)	69.8 (67.11–72.54)
2016, quarter 3	33.3 (31.18–35.39)	47.7 (45.12–50.25)	68.0 (65.15–70.81)
2016, quarter 4	30.6 (28.46–32.73)	42.2 (39.40–44.92)	62.3 (59.49–65.05)

NOTES: Data are based on household interviews of a sample of the civilian noninstitutionalized population. Beginning with 2012 data, the National Health Interview Survey transitioned to weights derived from the 2010 census. For 2003–2011 data, weights were derived from the 2000 census. In this Early Release, estimates for 2000–2002 were recalculated using weights derived from the 2000 census. For 1997–1999 data, weights were derived from the 1990 census. See [Technical Notes](#) for more details.

DATA SOURCE: NCHS, National Health Interview Survey, 1997–2016, Sample Adult Core component.

Data table for Figure 4.2. Percentage of persons who received an influenza vaccination during the past 12 months, by age group and sex: United States, 2016

Age (months and years) and sex	Percent	95% confidence interval
6 months–4 years, total	55.0	52.70–57.36
6 months–4 years, male	54.2	50.88–57.54
6 months–4 years, female	55.9	52.36–59.40
5–11, total	50.9	48.96–52.80
5–11, male	51.4	48.59–54.16
5–11, female	50.4	47.93–52.77
12–17, total	45.2	43.33–47.15
12–17, male	45.3	42.84–47.75
12–17, female	45.2	42.51–47.86
6 months–17 years, total	49.9	48.54–51.34
6 months–17 years, male	50.0	48.27–51.63
6 months–17 years, female	49.9	47.93–51.93
18–49, total	31.8	30.73–32.83
18–49, male	27.6	26.09–29.12
18–49, female	35.9	34.28–37.44
50–64, total	45.2	43.88–46.47
50–64, male	42.0	40.16–43.77
50–64, female	48.2	46.30–50.09
65 and over, total	67.2	65.77–68.65
65 and over, male	66.7	64.72–68.75
65 and over, female	67.6	65.97–69.21
6 months and over (crude ¹), total	43.9	43.09–44.74
6 months and over (crude ¹), male	41.1	40.26–41.98
6 months and over (crude ¹), female	46.6	45.49–47.68
18 and over (crude ¹), total	42.2	41.38–42.98
18 and over (crude ¹), male	38.4	37.48–39.39
18 and over (crude ¹), female	45.7	44.53–46.83
65 and over (age-adjusted ²), total	67.7	66.33–69.17
65 and over (age-adjusted ²), male	67.8	65.96–69.70
65 and over (age-adjusted ²), female	67.8	66.18–69.47

¹Crude estimates are presented.

²Estimates are age-adjusted using the projected 2000 U.S. population as the standard population and two age groups: 65–74 and 75 and over.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

DATA SOURCE: NCHS, National Health Interview Survey, 2016, combined Sample Adult and Sample Child Core components.

Data table for Figure 4.3. Percentage of persons aged 6 months and over who received an influenza vaccination during the past 12 months, by age group and race and ethnicity: United States, 2016

Age and race and ethnicity	Percent ¹	95% confidence interval
6 months–17 years, Hispanic or Latino	52.2	49.12–55.27
6 months–17 years, not Hispanic or Latino, single race, white	48.0	46.28–49.82
6 months–17 years, not Hispanic or Latino, single race, black	48.0	44.72–51.26
18 and over, Hispanic or Latino	32.6	30.06–35.23
18 and over, not Hispanic or Latino, single race, white	45.5	44.57–46.41
18 and over, not Hispanic or Latino, single race, black	35.8	33.46–38.10

¹Crude estimates are presented.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

DATA SOURCE: NCHS, National Health Interview Survey, 2016, combined Sample Adult and Sample Child Core components.