

Million Hearts® 2022 Snapshots of Progress

An overview of the Million Hearts 2022 risk factor measures,
including historical estimates and targets

Updated: September 2018



1. Introductory slide for “Snapshots of Progress” slide deck

Heart disease and stroke are the first and fifth leading causes of death in the United States. Million Hearts® 2022 is a national initiative, co-led by the Centers for Disease Control and Prevention (CDC) and Centers for Medicare and Medicaid Services (CMS), that has set an ambitious goal to prevent 1 million heart attacks, strokes, and other related cardiovascular events by 2022.

Million Hearts® 2022 focuses partner efforts around three priority areas:

Keeping people healthy by making changes to the environments in which people live, learn, work, and play to make it easier for people to make healthy choices.

Optimizing care so that those with and at risk for cardiovascular disease receive the services and acquire the skills needed to reduce the likelihood of having a heart attack or stroke; and

Improving outcomes for priority populations who suffer worse outcomes of cardiovascular disease and where there is evidence and the opportunity to make a significant impact.

Additional information about Million Hearts® 2022 can be found at <https://millionhearts.hhs.gov/>.

Getting to Goal

Preventing 1 million heart attacks and strokes by 2022
through improvement in key cardiovascular disease risk factors

	Intervention	Most current value	Target
A	Aspirin when appropriate	61%*	≥80%
B	Blood pressure control	49%†	≥80%
C	Cholesterol management	55%*	≥80%
S	Smoking cessation and prevalence reduction	22%†	20% reduction (<18%)
	Sodium intake reduction	3.5 g/day†	20% reduction (<2.8g/day)
	Physical inactivity reduction	29% inactive†	20% reduction (<23%)



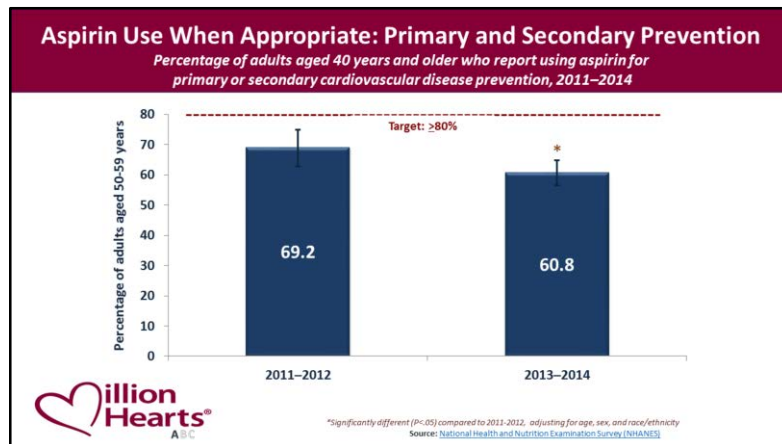
*Represents data from 2013-2014; †Represents data from 2015-2016

2. Getting to Goal

This slide provides an overview of the current prevalence estimates and targets for the key indicators focused on by Million Hearts® 2022: the ABCS of cardiovascular health (i.e., Aspirin when appropriate, Blood pressure control, Cholesterol management, and Smoking cessation and prevalence reduction) and reductions in mean daily sodium use and physical inactivity.

By meeting the targets for these evidence-based interventions the United States could experience more than 1 million fewer heart attacks, strokes, and other related events during 2017–2022.

Each measure is described in more detail on subsequent slides. Improving cardiac rehabilitation initiation after having a qualifying cardiac event or procedure is also a key indicator for the initiative, but data related to this measure are not currently included in these slides.



3a. Aspirin Use for Primary and Secondary Prevention

The US Preventive Services Task Force recommends initiating low-dose aspirin use for the primary prevention of cardiovascular events among adults aged 50 to 59 years who have no history of cardiovascular disease (CVD), a 10% or greater 10-year atherosclerotic CVD risk, and are not at increased risk for bleeding. Aspirin use for secondary event prevention is recommended by multiple guidelines and has been incorporated in National Quality Forum-approved measures for adults aged 40 years and older with a history of CVD.

This slide describes the percentage of adults aged 40 years and older with indications for aspirin use for primary or secondary CVD prevention who report taking aspirin, by year grouping, in comparison to the Million Hearts 2022 target of 80% or higher. CDC analyzed 2011–2014 data from the National Health and Nutrition Examination Survey (NHANES) dataset to calculate this measure. The methodology is described here:

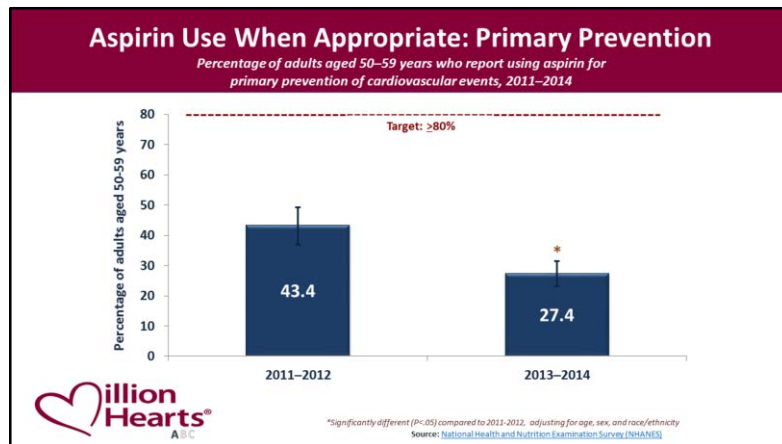
https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w.

In the figure, there are two 2-year groupings on the x-axis (2011–2012 and 2013–2014). Previous year data is not available as these data were not collected before 2011. The y-axis represents the percentage of all adult patients aged 40 years and older who have indications for over-the-counter aspirin use for primary or secondary CVD prevention. Each bar represents the percentage of adults who report taking aspirin. All analyses were conducted using statistical software to account for the complex sampling design of the surveys and to calculate weighted prevalence estimates and 95% confidence intervals (CIs). The 95% CIs are represented in the figure by the lines included with each prevalence estimate bar.

During 2011–2012, the compliance rate for aspirin use was 69.2% (95% CI: 62.7–75.0) among adults

with indications for aspirin use for primary or secondary CVD prevention. In 2013–2014, the percentage was 60.8% (95% CI: 56.5–64.9). There was a statistically significant change in rates ($P<.05$) comparing the findings in 2011–2012 to those in 2013–2014, adjusting for age, sex, and race/ethnicity.

Interpretation—The majority of adults age 40 years and older who are recommended aspirin use for primary or secondary CVD prevention are in compliance. However, this percentage has decreased over time from 69.2% in 2011–2012 to 60.8% in 2013–2014.



3b. Aspirin Use for Primary Prevention

The US Preventive Services Task Force recommends initiating low-dose aspirin use for the primary prevention of cardiovascular disease (CVD) in adults aged 50 to 59 years who have no history of CVD, a 10% or greater 10-year atherosclerotic CVD risk, and are not at increased risk for bleeding.

This slide describes the percentage of this population who report taking aspirin, by year grouping, in comparison to the Million Hearts 2022 target of 80% or higher. CDC analyzed 2011–2014 data from the National Health and Nutrition Examination Survey dataset to calculate this measure. Previous year data is not available as these data were not collected before 2011. The methodology is described here:

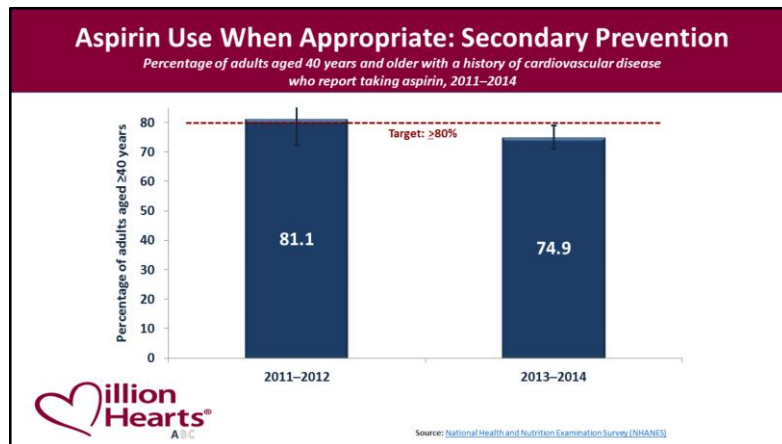
https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w

In the figure, there are two 2-year groupings on the x-axis (2011–2012 and 2013–2014). The y-axis represents the percentage of adults aged 50–59 years who have indications for over-the-counter aspirin use for primary CVD prevention. Each bar represents the percentage of adults who report taking aspirin. All analyses were conducted using statistical software to account for the complex sampling design of the surveys and to calculate weighted prevalence estimates and 95% confidence intervals (CIs). The 95% CIs are represented in the figure by the lines included with each prevalence estimate bar.

During 2011–2012, the compliance rate for aspirin use was 43.4% (95% CI: 32.3–55.2) among adults aged 50–59 years with indications for aspirin use for primary CVD prevention. In 2013–2014, the

percentage was 27.4% (95% CI: 20.0–36.3). There was a statistically significant change in rates ($P<.05$) comparing the findings in 2011–2012 to those in 2013–2014, adjusting for age, sex, and race/ethnicity.

Interpretation—A majority of adults aged 50-59 with indications for aspirin use for primary CVD prevention were not in compliance in 2011-2012. In 2013-2014, there was a statistically significant percentage decrease in compliance.



3c. Aspirin Use for Secondary Prevention

Aspirin use for secondary cardiovascular event prevention is recommended by multiple guidelines and has been incorporated in National Quality Forum-approved measures for adults aged 40 years and older with a history of cardiovascular disease (CVD).

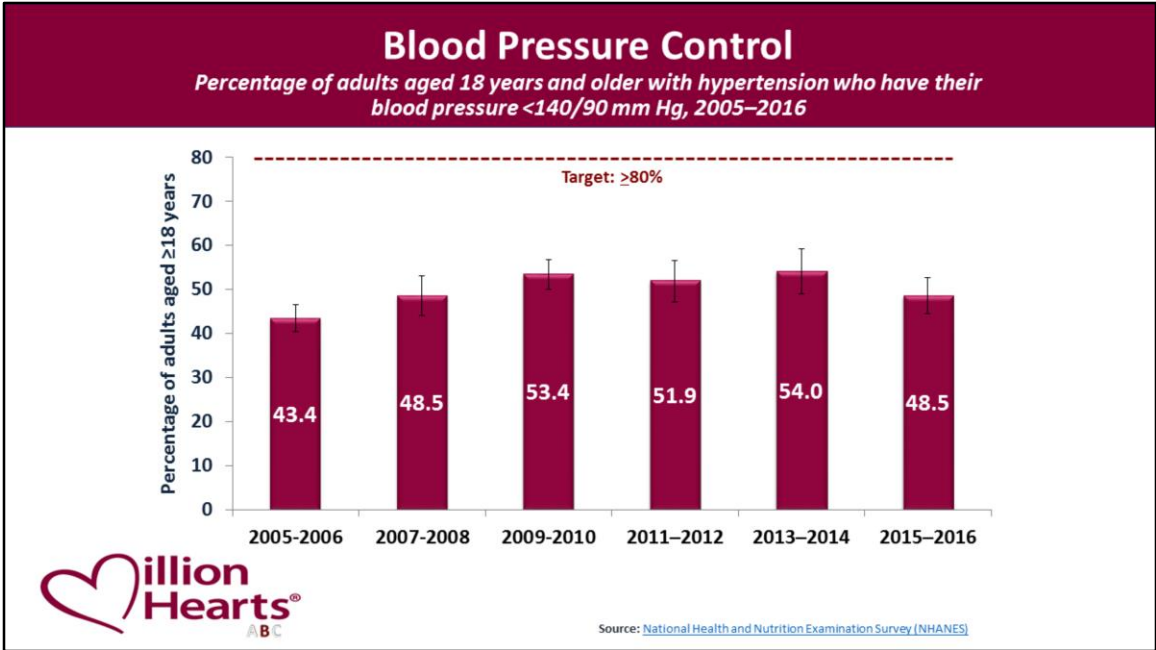
This slide describes the percentage of this population who report taking aspirin, by year grouping, in comparison to the Million Hearts® target of 80% or higher. CDC analyzed 2011–2014 data from the National Health and Nutrition Examination Survey dataset to calculate this measure. Previous year data is not available as this data was not collected before 2011. The methodology is described here: https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w

In the figure, there are two 2-year groupings on the x-axis (2011–2012 and 2013–2014). The y-axis represents the percentage of adults aged 40 years and older who have indications for over-the-counter aspirin use for secondary CVD prevention. Each bar represents the percentage of adults aged 40 years and older who report taking aspirin. All analyses were conducted using statistical software to account for the complex sampling design of the surveys and to calculate weighted prevalence estimates and 95% confidence intervals (CIs). The 95% CIs are represented in the figure by the lines included with each prevalence estimate bar.

During 2011–2012, the compliance rate for aspirin use was 81.1% (95% CI: 72.2–87.6) among adults aged 40 years and older with indications for aspirin use for secondary CVD prevention. In 2013–2014, the percentage was 74.9% (95% CI: 71.0–78.5). No significant change occurred in the values

($P \geq .05$) comparing the findings in 2011–2012 to those in 2014–2015, adjusting for age, sex, and race/ethnicity.

Interpretation—A majority of adults aged 40 years of age and older with indications for aspirin use for secondary CVD prevention were in compliance. This percentage has decreased over time from 81.1% in 2011–2012 to 74.9% in 2013–2014, although the decrease is not statistically significant.



4. Blood Pressure Control

Hypertension is a modifiable risk factor for cardiovascular disease. It affects one in three adults in the United States, contributing to one out of every seven deaths and nearly half of all cardiovascular disease-related deaths in the United States.

This slide describes the percentage of adults aged 18 years and older with hypertension who have their blood pressure under control, by year grouping, in comparison to the Million Hearts® target of 80% or higher. CDC analyzed 2005–2016 data from the National Health and Nutrition Examination Survey (NHANES) to calculate this measure. The methodology is described here:

https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w

In the figure, there are six 2-year groupings on the x-axis (2005-2006, 2007-2008, 2009-2010, 2011–2012, 2013–2014, and 2015–2016). The y-axis represents the

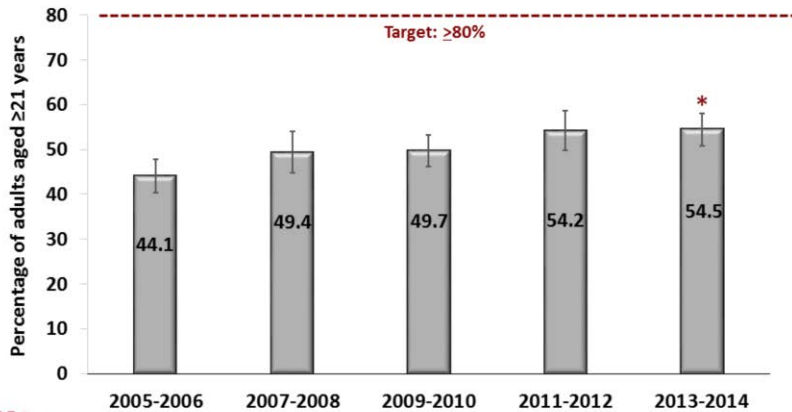
percentage of all adults with hypertension, defined as an average blood pressure $\geq 140/90$ mm Hg or the current use of blood pressure-lowering medication. Each bar represents the percentage of adults with hypertension who had their blood pressure under control—defined as a treated systolic/diastolic blood pressure $< 140/90$ mmHg—during the time of analysis (i.e., number under control divided by the total number of adults with hypertension). All analyses were conducted using statistical software to account for the complex sampling design of the surveys and to calculate weighted prevalence estimates and 95% confidence intervals (CIs). The 95% CIs are represented in the figure by the lines included with each prevalence estimate bar.

During 2005–2006, 43.4% (95% CI: 40.3–46.6) of adults with hypertension had their blood pressure under control; the rate was 48.5% (95% CI: 44.0–52.9) in 2007–2008, 53.4% (95% CI: 49.9–56.7) in 2009–2010, 51.9% (95% CI: 47.2–56.6) in 2011–2012, 54.0% (95% CI: 48.9–59.1) in 2013–2014, and 48.5% (95% CI: 44.4–52.6) in 2015–2016. No significant change occurred in the values ($P \geq .05$) comparing the findings in 2005–2006 to those in 2015–2016, adjusting for age, sex, and race/ethnicity.

Interpretation—Hypertension affects millions of persons in the United States, and only about half of those with hypertension have their condition controlled. This percentage increased over time from 43.4% in 2005–2006 to 54.0% in 2013–2014, but dropped to 48.5% in 2015–2016.

Cholesterol Management

Percentage of adults aged 21 years and older who are eligible for and using statins, 2005–2014



*Significantly different ($P < .05$) compared to 2005-2006, adjusting for age, sex, and race/ethnicity
Source: National Health and Nutrition Examination Survey (NHANES)

5. Cholesterol Management

High levels of low-density lipoprotein cholesterol (LDL-C), a major risk factor for coronary heart disease, can be treated effectively. In 2013, the American College of Cardiology and the American Heart Association released new clinical cholesterol management guidelines, focusing on statin use in eligible adults at high risk for having a cardiovascular event rather than specific LDL-C targets.

This slide describes the percentage of adults aged 21 years and older who are recommended statins and undergoing statin therapy, in comparison to the Million Hearts® 2022 target of 80% or higher. CDC analyzed 2005–2014 data from the National Health and Nutrition Examination Survey (NHANES) to calculate this measure. The methodology is described here

https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w.

In the figure, there are five 2-year groupings on the x-axis (2005-2006, 2007-2008, 2009-2010, 2011-2012, and 2013-2014). The y-axis represents the percentage of all adults aged 21 years and older eligible for or undergoing statin therapy. Eligible patients included non pregnant fasting adults aged ≥ 21 years with clinical atherosclerotic cardiovascular disease (ASCVD), LDL-C levels >190 mg/dl with no ASCVD, diabetes with no clinical ASCVD and LDL-C 70-189 mg/dL for those aged 40-75, or at $\geq 7.5\%$ risk of ASCVD with no current ASCVD or diabetes and LDL >70 -189 mg/dl. Each bar represents the percentage of adults with an indication for statin use who report taking a statin. All analyses were conducted using statistical software to account for the complex sampling design of the surveys and to calculate weighted prevalence estimates and 95% confidence intervals (CIs). The 95% CIs are represented in the figure by the lines included with each prevalence estimate bar.

During 2005-2006, 44.1% (95% CI: 40.5-47.8) of adults recommended statin therapy for cholesterol management reported taking statins; the rate was 49.4% (95% CI: 44.9-54.0) in 2007-2008, 49.7% (95% CI: 46.3-53.2) in 2009-2010, 54.2% (95% CI: 49.8-58.5) in 2011-2012, and 54.5% (95% CI: 50.9-58.1) in 2013-2014. There was a statistically significant change in values ($P < .05$) comparing the findings in 2005-2006 to those in 2013-2014, adjusting for age, sex, and race/ethnicity.

Interpretation—Despite a significant increase in statin use for cholesterol management among eligible US adults aged 21 years and older from 2005-2014, its use remains low.

6. Smoking Cessation and Prevalence Reduction

Tobacco use continues to be the leading cause of preventable disease and death in the United States; cigarette smoking accounts for approximately 443,000 of premature deaths annually. The Public Health Service's (PHS) Clinical Practice Guideline for *Treating Tobacco Use and Dependence: 2008 Update* ([PHS Guideline](#)) outlines clinical preventive services that include tobacco use screening and known effective cessation treatments that are important components of a comprehensive strategy for decreasing tobacco use.

This slide describes the percentage of adults aged 18 years and older who were current users of combustible tobacco products, compared to the Million Hearts® 2022 target of a 20% reduction since 2015-2016 (prevalence of ~18% or lower). CDC analyzed 2005–2016 data from the National Survey on Drug Use and Health (NSDUH) of the Substance Abuse and Mental Health Services Administration (SAMHSA), a comprehensive survey estimating on the use of drugs, alcohol, and tobacco, in addition to mental health. The methodology is described here:

https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w

In the figure, there are six 2-year groupings on the x-axis (2005-2006, 2007-2008, 2009-2010, 2011–2012, 2013–2014, and 2015–2016). The y-axis represents the percentage of all adults aged 18 years and older. Each bar represents the percentage of adults who reports currently using one or more combustible tobacco products. Current use was defined as an individual who had smoked at least part of a cigar in the last 30 days, at least once out of a pipe in the past 30 days, or at least 100 cigarettes in their entire life and had smoked at least part of a cigarette in the last 30 days.

During 2005–2006, 28.2% (95% CI: 27.6–28.7) of adults reported using combustible tobacco products; the rate was 26.9% (95% CI: 26.2–27.6) in 2007-2008, 26.2% (95% CI: 25.6–26.7) in 2009-2010, 25.1% (95% CI: 24.6-25.7) in 2011-2012, 24.0% (95% CI: 23.5–24.4) in 2013–2014, and 22.3% (95% CI: 21.9–22.7) in 2015–2016. There was a statistically significant change in values ($P<.05$) comparing the findings in 2005–2006 to those in 2015–2016, adjusting for age, sex, and race/ethnicity.

Interpretation—The data indicate that clinical preventive services efforts have been successful in reducing combustible tobacco use during 2005–2016. The Million Hearts® 2022 target of a 20% reduction can be achieved through the use of interventions outlined in the PHS's Clinical Practice Guideline, which recommends screening for tobacco use and offering effective cessation treatments. In addition, recommendations from the Guide to Community Preventive Services suggests that provider-reminder systems increase health-care providers' assessment and treatment of tobacco use in a range of clinical settings and populations.

7. Sodium Intake Reduction

Excess sodium intake is a known risk factor for hypertension. The *2015-2020 Dietary Guidelines for Americans* recommends that all adults consume less than 2,300 mg of dietary sodium per day, with certain groups (e.g. persons with hypertension) further benefiting from consuming less than 1,500 mg per day.

This slide describes the mean daily sodium intake among US adults aged 18 years and older, compared to the Million Hearts® target of a 20% reduction since 2015-2016 (mean daily intake of ~2800 mg/day or lower). CDC analyzed 2005–2016 data from the National Health and Nutrition Examination Survey (NHANES). The methodology is described here:

https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w

In the figure, there are six 2-year groupings on the x-axis (2005-2006, 2007-2008, 2009-2010, 2011–2012, 2013–2014, and 2015-2016). The y-axis represents mean daily sodium. Each bar represents the mean daily sodium intake among adults aged 18 years and older through a 1st day 24-hour dietary recall collected at a NHANES mobile examination center.

During 2005–2006, the mean dietary sodium intake was 3701 mg/day (95% CI: 3600–3802); it was 3599 mg/day (95% CI: 3480–3719) in 2007-2008, 3594 mg/day (95% CI: 3538–3651) in 2009-2010, 3618 mg/day (95% CI: 3565–3670) in 2011-2012, 3534 mg/day (95% CI: 3472–3595) in 2013–2014, and 3535 mg/day (95% CI: 3452-3618) in 2015-2016. There was a statistically significant change in values ($P < .05$) comparing the findings in 2005–2006 to those in 2015–2016, adjusting for age, sex, and race/ethnicity.

Interpretation—These data indicate that while mean daily sodium intake among US adults aged 18 years and older has decreased since 2005-2006, it remains well above the nationally recommended level of less than 2,300 mg per day.

7. Physical Inactivity

Lack of physical activity is a major predictor of heart disease and stroke. Leisure time physical activity is one of four categories (others being occupational, domestic, and transportation), and is often the most important in predicting cardiovascular health.

This slide describes the percentage of US adults aged 18 years and older who report being physical inactive, compared to the Million Hearts® target of a 20% reduction since 2015-2016 (prevalence of ~23% or lower). Physical inactivity is defined as reporting no light to moderate or vigorous leisure-time physical activity for at least 10 minutes per week. CDC analyzed 2005–2016 data from the National Health Interview Survey (NHIS). The methodology is described here:

https://www.cdc.gov/mmwr/volumes/67/wr/mm6735a3.htm?s_cid=mm6735a3_w

In the figure, there are six 2-year groupings on the x-axis (2005-2006, 2007-2008, 2009-2010, 2011–2012, 2013–2014, and 2015–2016). The y-axis represents the percentage of all adults aged 18 years and older. Each bar represents the percentage of adults who are considered physically inactive.

During 2005–2006, 39.7% (95% CI: 38.9–40.6) of adults reported using combustible tobacco products, with 37.6% (95% CI: 36.5–38.7) in 2007-2008, 32.5% (95% CI: 31.7–33.4) in 2009-2010, 30.9% (95% CI: 30.1-31.8) in 2011-2012, 30.6% (95% CI: 29.8–31.5) in 2013–2014, and 29.1% (95% CI: 28.3–29.8) in 2015–2016. There was a statistically significant change in values ($P < .05$) comparing the findings in 2005–2006 to those in 2015–2016, adjusting for age, sex, and race/ethnicity.

Interpretation—The data indicates that the prevalence of adults considered physically inactive has decreased significantly since 2005-2006. However, almost 1 in 3 adults are still considered physically inactive.