MEPS

Research Findings #41

Use of Clinical Preventive Services in the United States: Estimates from the Medical Expenditure Panel Survey (MEPS), 2015

EPS

Abstract

This report examines the extent to which U.S. adults age 35 and older were reported to have received age/sex appropriate preventive care services (as of early 2015) in accordance with U.S. Preventive Services Task Force and the Advisory Committee on Immunization Practices recommendations. The applicable population subgroups (defined by age and sex) and recommended periodicity of service receipt differ across the services examined. Variation in the extent that these preventive services were received within recommended periodicities by type of service, age/sex group, and selected sociodemographic characteristics is also examined.

Suggested Citation

* * *

Table of Contents

Use of Clinical Preventive Services in the United States: Estimates from the Medical Expenditure Panel Survey (MEPS), 2015

Amanda E. Borsky, DrPH, MPP, Emily M. Mitchell, PhD, Steven R. Machlin, MS, Arlene S. Bierman, MD, MS, Chunliu Zhan, PhD, Therese Miller, DrPH, Quyen Ngo-Metzger, MD, MPH, and David Meyers, MD

Introduction

Clinical preventive services can save lives (1,2) by reducing a person's risk for developing a disease and by detecting a disease at earlier stages when it is more treatable. The U.S. Preventive Services Task Force (USPSTF) and the Advisory Committee on Immunization Practices (ACIP) provide evidence-based recommendations for preventive services, including screenings, behavioral counseling, preventive medications, and vaccinations. In this report, we provide estimates of the percentage of the American population who reported receiving 15 clinical preventive services, based on USPSTF and ACIP recommendations, using nationally representative data from the Agency for Healthcare Research and Quality's (AHRQ) Medical Expenditure Panel Survey (MEPS) (3,4).

Until 2015, MEPS obtained information about receipt of preventive services through its core data collection instrument for which one household respondent typically responds for all household members. In 2015, as a pilot, information about preventive services was collected in a stand-alone self-administered questionnaire (SAQ) (i.e., each person was responding on behalf of him or herself). This SAQ was given to adults age 35 and older who completed their last MEPS interview during the January to May field period of 2015. Beginning in 2018, these questions will be administered every other year as part of the standard MEPS SAQ, and result in larger sample sizes.

The 15 clinical preventive services included in the SAQ were identified with input from a National Steering Committee based on: 1) being scientifically sound and 2) clinically important. All survey questions went through cognitive, usability, and field testing to refine the instrument and establish validity. Some services are recommended for specific age subgroups of the population age 35 and older and some are gender specific. Moreover, the reference time period for each preventive service corresponds to the respective USPSTF or ACIP recommendation. For example, it is recommended that both men and women ages 35–74 have their cholesterol checked within the past 5 years, while it is recommended that women ages 50–74 receive a mammogram every 2 years. The questions that form the basis for this report asked whether each specific service had been received within the recommended time period retrospectively from the date of interview in early 2015 (see https://meps.ahrq.gov/mepsweb/survey_comp/survey.jsp#supplemental for SAQ questionnaires).

The complete list of clinical preventive services by age/sex group is shown in Table 1. They include:

- Cancer preventive services (breast, cervical, colon)

- Cardiovascular disease preventive services (aspirin use, blood pressure, cholesterol)

- Screening and counseling preventive services (alcohol use, tobacco use, depression, obesity)

- Vaccinations (influenza [or "flu"], pneumococcal, zoster [also known as shingles vaccine])

- Osteoporosis screening

The clinical preventive services also include two measures of overuse, recommended for inclusion by the National Steering Committee to account for the importance of avoiding low-value services. These services are not recommended for persons age 75 and older by the USPSTF, therefore it is "appropriate" to not receive these services. More detailed descriptions of each preventive service measure are included in the Definitions section of this report.

In this report, we present the 2015 results for specific age/sex groups because appropriate services vary according to age, sex, and medical history.[1] For each age/sex group, we focus on estimates of the percentage of eligible persons who reported receiving the recommended preventive services. We also provide tables with estimates of the population size and percentage that are eligible to receive each service. Within the specific age/sex groups, we also examine variation in reported receipt of services by selected sociodemographic characteristics including education, insurance status, income level, and race/ethnicity (see Definitions section). For race/ethnicity, we report white non-Hispanic versus other race/ethnicity due to sample size limitations for minorities.

Throughout this report, only differences in estimates between sociodemographic subgroups that are statistically significant at the p<.05 level are discussed. Note that some large differences between estimates are not statistically significant due to lack of precision (i.e., large standard errors) for one or both of the underlying estimates. The incorporation of these questions into the standard MEPS SAQ in alternate years beginning in 2018 will increase sample sizes for preventive services questions, which may improve the precision of these types of estimates.

Highlights

Overall

- As of early 2015, there were differences in appropriate receipt of clinical preventive services among American adults age 35 and older by type of preventive service, age/sex groups, and by selected sociodemographic characteristics. Services were based on recommendations from the U.S. Preventive Services Task Force and the Advisory Committee on Immunization Practices.
- For adults ages 35–64, persons without insurance coverage were less likely than those with insurance to receive most recommended preventive services.

Cancer preventive services

- For the three cancer preventive services examined, the percentage of women receiving each recommended service ranged across sociodemographic subgroups from 61–77 percent and the percentage of men receiving each service ranged from 56–77 percent.

---

[1] Eligible adults are those for whom a particular preventive service is recommended and do not include individuals with medical issues that make the service not part of recommended preventive care (e.g., a woman who has had a hysterectomy and no longer has a cervix should not be screened for cervical cancer or a man who has an allergy to aspirin should not be counselled about taking aspirin to prevent heart disease).

Cardiovascular preventive services

- For blood pressure and cholesterol screening, the percentage of persons receiving each recommended service ranged across sociodemographic subgroups from 80–97 percent.
- Women were less likely than men to have had a discussion about aspirin use with a health care provider, and adults ages 50–64 were less likely than adults ages 65–74 to have had such a discussion.

Screening and counseling preventive services

- For alcohol-use screening and counseling and depression screening, the percentage of persons receiving each recommended service ranged across sociodemographic subgroups from 33–52 percent.
- For tobacco-use and obesity screening and counseling, the percentage of persons receiving each recommended service ranged across sociodemographic subgroups from 56–74 percent.

Vaccinations

- Among both men and women age 65 and older, relatively low proportions had ever received the zoster vaccine (38.9 percent for women and 36.6 percent for men). People with less education were less likely to have received zoster vaccinations.

Osteoporosis screening

- Nearly two-thirds (63.2 percent) of women age 65 and older were screened for osteoporosis. However, women who were of a race/ethnicity other than white non-Hispanic and did not have a college degree or had low income were less likely to receive osteoporosis screening.

Findings

Women ages 35–64

Of the recommended clinical preventive services shown in Table 1, the following eight preventive services were recommended for all women ages 35–64:

- Cervical cancer screening (except women who ever had a hysterectomy or cervical cancer)
- Blood pressure screening
- Cholesterol screening
- Alcohol use screening and counseling
- Tobacco use screening and counseling
- Depression screening
- Obesity screening and counseling
- Influenza vaccine

Among women ages 50–64, the following three preventive services were also recommended:

- Breast cancer screening (except women who ever had breast cancer or both breasts removed)

- Colorectal cancer screening (except women who ever had colon cancer or their colon removed)

- Aspirin-use discussions (except women with pre-existing conditions that preclude taking aspirin—see Definitions section)

Table 1.1 provides the estimated population totals and percentage of women ages 35–64 who were eligible for each of the preventive services by selected sociodemographic characteristics. Table 1.2 shows the percentage of women ages 35–64 that reported receiving each recommended preventive service, among those eligible to receive the service. In general, women with private insurance coverage were more likely than uninsured women to receive most preventive services. Specific results for this age/sex group in Table 1.2 are described below.

Cancer preventive services

Three-quarters of women ages 35–64 received screening for cervical cancer (75.5 percent). Lack of insurance coverage was associated with a lower likelihood of screening (55.8 percent of uninsured compared to 80.5 percent of those with private insurance).

Among women ages 50–64, 72.6 percent received breast cancer screening and 61.2 percent received colon cancer screening.

Cardiovascular preventive services

A large majority of women ages 35–64 received their recommended cardiovascular preventive services: blood pressure screening (88.0 percent) and cholesterol screening (83.0 percent). Being uninsured, having a low income, and being of a race/ethnicity other than white Non-Hispanic were characteristics associated with a lower receipt of each of these services.

Only one-third of women (33.0 percent) ages 50–64 had a discussion about aspirin use.

Screening and counseling preventive services

Receipt of the recommended screening and counseling services for women ages 35–64 differed across services. Less than one-half of women ages 35–64 were screened and counseled for alcohol use or screened for depression (42.5 percent and 45.9 percent, respectively), whereas approximately two-thirds were screened and counseled for tobacco use and obesity (64.1 percent and 68.0 percent, respectively). The sociodemographic characteristics associated with receipt of these services also varied. For example, women ages 35–64 with no college education were less likely to receive recommended screening and counseling services than women with a college degree, although this difference between education groups was not statistically significant for depression. Similarly, low income women were less likely than those with high income to receive most of the recommended screening and counseling preventive services, although this difference between income groups was not statistically significant for depression screening.

Vaccinations

Approximately 43 percent of women ages 35–64 received influenza vaccination. Women without

health insurance and low- or middle-income women were less likely to receive the vaccine. For example, only 11.2 percent of uninsured women received their recommended influenza vaccine in contrast with 46.9 percent of women with private insurance and 52.8 percent of women with public insurance.

Women age 65 and older

Among women age 65 and older, the following eight preventive services are recommended:

- Blood pressure screening
- Alcohol-use screening and counseling
- Tobacco-use screening and counseling
- Depression screening
- Influenza vaccine
- Pneumococcal vaccine
- Zoster vaccine (also known as the shingles vaccine)
- Osteoporosis screening (except women who had been diagnosed with osteoporosis)

Among women ages 65–74, the following preventive services are also recommended:

- Breast cancer screening (except women who ever had breast cancer or both breasts removed)
- Colon cancer screening (except women who ever had colon cancer or their colon removed)
- Cholesterol screening
- Aspirin-use discussion (except women with pre-existing conditions that preclude taking aspirin—see Definitions section)
- Obesity screening and counseling

Table 2.1 gives the population totals and percentage eligible for each screening procedure by age and sociodemographic characteristics, which takes into account exclusions due to medical history. Only osteoporosis screening, aspirin-use discussion, breast cancer screening, and colon cancer screening are included in this table, since 100 percent of women age 65 and older were eligible to receive the remaining services.

Table 2.2 shows the percentage of women age 65 and older that reported receiving each recommended screening service, among those eligible to receive the service. There were some differences by sociodemographic characteristics, but they varied depending on the preventive service. Specific results for this age/sex group in Table 2.2 are described below.

Cancer preventive services

Among women ages 65–74, approximately three out of four women received breast cancer screening (77.0 percent), and a similar percentage were screened for colon cancer (73.2 percent).

Cardiovascular preventive services

Nearly all women age 65 and older (93.2 percent) received blood pressure screening.

Among women ages 65–74, nearly all (93.5 percent) received cholesterol screening and 58.9 percent had discussions about aspirin use.

Screening and counseling preventive services

Fewer than one-half of women age 65 and older received alcohol-use screening and counseling (43.3 percent) or received depression screening (43.1 percent), while nearly two-thirds received tobacco-use screening and counseling (62.8 percent). Low-income women were less likely than high-income women to receive alcohol-use screening and counseling (36.0 versus 54.4 percent), and women with no college education were less likely to receive alcohol-use screening and counseling than women with a college degree (36.1 versus 55.9 percent).

Among women ages 65–74, nearly three out of four received obesity screening and counseling (72.8 percent).

Vaccinations

Approximately two-thirds of women age 65 and older received a pneumococcal vaccine or influenza vaccine (67.3 percent and 69.2 percent, respectively), whereas only 38.9 percent received a zoster vaccine. Receipt of zoster vaccine varied by education, insurance, and race/ethnicity. Women with Medicare and other public insurance were less likely than women with Medicare and private insurance to receive the zoster vaccine. In addition, white non-Hispanic women were more likely than women of other races/ethnicities to receive pneumococcal vaccine or zoster vaccine.

Osteoporosis screening

Overall, 63.2 percent of women age 65 and older were screened for osteoporosis. Rates of osteoporosis screening differed by sociodemographic characteristics. Women who were of a race/ethnicity other than white non-Hispanic, did not have a college degree, or had low income were less likely to receive osteoporosis screening. For example, 49.0 percent of women with no college education received osteoporosis screening versus 87.4 percent of women with a college degree.

Men ages 35–64

Among men ages 35–64, the following seven preventive services are recommended:

- Blood pressure screening
- Cholesterol screening
- Alcohol-use screening and counseling
- Tobacco-use screening and counseling
- Depression screening
- Obesity screening and counseling
- Influenza vaccine

Among men ages 50–64, the following are also recommended:

- Colon cancer screening (except men who ever had colon cancer or their colon removed)

- Aspirin-use discussion (except men with pre-existing conditions that preclude taking aspirin— see Definitions section)

Table 3.1 provides the estimated population totals and percentage eligible for each screening procedure by age for each of the other demographic variables. All men ages 35–64 were eligible to receive blood pressure, cholesterol, alcohol-use, tobacco-use, depression, and obesity screening, as well as influenza vaccine (not included in table).

Table 3.2 shows the percentage of men ages 35–64 that reported receiving each recommended preventive service, among those eligible. Among this population subgroup, uninsured men were less likely than men with private insurance to receive most of the recommended services. Specific results for this age/sex group in Table 3.2 are described below.

Cancer preventive services

Among men ages 50–64, 56.2 percent received colon cancer screening.

Cardiovascular preventive services

Over three-quarters of men ages 35–64 received blood pressure screening (80.3 percent) or received cholesterol screening (76.0 percent). Men with less education, or who were uninsured or had low income were less likely to receive either service. Men who were of a race/ethnicity other than white non-Hispanic were also less likely to receive blood pressure screening (71.8 versus 84.9 percent).

Among men ages 50–64, 42.6 percent had aspirin-use discussions with a health care provider.

Screening and counseling preventive services

Slightly more than one-half of men ages 35–64 received obesity screening and counseling (55.8 percent) or received tobacco-use screening and counseling (56.3 percent). However, only about one-third of men received alcohol-use screening and counseling (34.7 percent) or were screened for depression (32.7 percent). Lack of insurance coverage was associated with lower receipt of any of these services. For example, only 14.4 percent of uninsured men received alcohol-use screening and counseling in contrast to 37.6 percent of men with private insurance and 41.4 percent of men with public insurance. Men with no college education were also less likely than those with a college degree to receive all screening and counseling preventive services, except for alcohol use, where differences by education were not statistically significant.

Vaccinations

Just over one-third of men ages 35–64 received the influenza vaccine (37.2 percent). There were statistically significant differences by education and insurance coverage. For example, men with no college education or some college education were less likely than those with a college degree to receive the influenza vaccine (30.0 percent and 33.1 percent, respectively, versus 50.5 percent).

Men age 65 and older

For men age 65 and older, the following preventive services are recommended:

- Blood pressure screening

- Alcohol-use screening and counseling

- Tobacco-use screening and counseling

- Depression screening

- Influenza vaccine

- Pneumococcal vaccine

- Zoster vaccination

Among men ages 65–74, the following four preventive services are also recommended:

- Colon cancer screening (except men who ever had colon cancer or their colon removed)

- Cholesterol screening

- Aspirin-use discussion (except men with pre-existing conditions that preclude taking aspirin— see Definitions section)

- Obesity screening and counseling

Table 4.1 provides estimated population totals and percentage eligible for each screening procedure by age and the other sociodemographic variables, which takes into account exclusions due to medical history as previously described. All men age 65 and older were eligible to receive blood pressure, alcohol-use, tobacco-use, and depression screening, as well as influenza, pneumococcal, and zoster vaccines (not included in table).

Table 4.2 shows the percentage of men age 65 and older that reported receiving each recommended screening service, among those eligible to receive the service. Specific results for this age/sex group in Table 4.2 are described below.

Cancer screening

About three-quarters of men ages 65–74 received colorectal cancer screening (76.5 percent). Men who had no college education (67.4 percent) were less likely to get screened than men with a college degree (87.2 percent). Middle-income men (66.1 percent) were less likely to get colorectal cancer screening than high-income men (83.8 percent).

Cardiovascular preventive services

Nearly all men age 65 and older received blood pressure screening (96.7 percent). Those with Medicare and private health insurance were slightly more likely to be screened than men with Medicare only (98.8 versus 93.5 percent, respectively).

The vast majority (94.8 percent) of men ages 65–74 had their cholesterol checked, and 71.6 percent had aspirin-use discussions. Men without a college education were somewhat less likely to have their cholesterol screened (90.1 percent) than those with a college degree (99.1 percent).

Screening and counseling preventive services

Approximately one-half of men age 65 and older received alcohol-use screening and counseling (51.6 percent) or were screened for depression (46.8 percent), while about two-thirds received tobacco-use screening and counseling (69.4 percent). Men who were of a race/ethnicity other than white non-Hispanic were less likely to receive tobacco screening and counseling than white non-Hispanic men (55.6 versus 72.9 percent).

About three-quarters of men ages 65–74 received recommended obesity screening and counseling (74.3 percent).

Vaccinations

Receipt of recommended vaccinations for men age 65 and older varied depending on the vaccine: 36.6 percent received the zoster vaccine, 64.3 percent received the pneumococcal vaccine, and 71.3 percent received the influenza vaccine. Men were less likely to receive the zoster vaccine if they had no college (25.7 percent) or some college (26.8 percent), or had low income (26.5 percent). For pneumococcal vaccine, men of a race/ethnicity other than white non-Hispanic were less likely to receive it than white non-Hispanic men (48.7 versus 68.2 percent).

Non-recommended services, age 75 and older

Two preventive services, cervical cancer screening for women and prostate-specific antigen (PSA) screening for men, are recommended to *not* be received at age 75 or older. Our estimates of the extent of compliance with these recommendations exclude women who had a hysterectomy or cervical cancer and men who had prostate cancer previously because these services do not apply to them.

Table 5.1 shows the eligibility (i.e., did not previously have the cancer or had the organ removed) and reported non-receipt of these two services. About two-thirds (68.3 percent) of eligible women in this age group were correctly *not* given cervical cancer screening, and one-half (50.2 percent) of eligible men age 75 and older correctly did *not* receive PSA screening. Sample sizes were too small to compare variation by sociodemographic characteristics for these two measures.

Summary and Conclusions

This report presents estimates of the percentages of American adults age 35 and older that reported receiving USPSTF- and ACIP-recommended clinical preventive services, as of early 2015. The applicable population subgroups (age/sex) and recommended periodicity of service receipt vary across the services examined. There were differences in the extent that these preventive services were received within recommended periodicities by type of service, age/sex group, and selected sociodemographic characteristics. One prominent finding is that uninsured adults ages 35–64 were less likely to receive most of the recommended services than their counterparts with insurance coverage.

The results presented in this report were based on a pilot. Only differences in estimates between sociodemographic subgroups that are statistically significant at the $p<.05$ level are discussed. Note that some large differences between estimates are not statistically significant due to lack of precision (i.e., large standard errors) for one or both of the underlying estimates. The incorporation of these questions into the standard MEPS SAQ in alternate years beginning in 2018 will increase sample sizes for preventive services questions, which may improve the precision of these types of estimates.

Data Source

In 2015, questions about preventive services were administered in a stand-alone self-administered questionnaire (SAQ) to adults age 35 and older during the fifth round of the MEPS Panel 18, which was fielded from January to May 2015. More information is available at: https://meps.ahrq.gov/data_stats/download_data/pufs/h173/h173doc.shtml

Definitions

Preventive services

The questions about preventive services are available on the MEPS Website at: https://meps.ahrq.gov/mepsweb/survey_comp/survey.jsp#supplemental. There are separate surveys for men and women. The surveys ask about whether a doctor, nurse, or other health care provider has assessed for 15 preventive services.

Figure 1. Recommended clinical preventive services

Preventive service type	Definition, including time period	Population received	Eligibility
Cancer			
Breast cancer	Within past 2 years, had a mammogram	Women Ages 50–74	Has not had both breasts removed or had breast cancer
Cervical cancer	Within past 5 years, had a Pap test	Women Ages 35–64	Has not had a hysterectomy or had cervical cancer
Colon cancer	Had at least one of the following: • Within past 10 years, had a colonoscopy • Within past 5 years, had a sigmoidoscopy • Within past 12 months, had a stool test	Women & men Ages 50–74	Has not had colon cancer or entire colon removed
Cardiovascular			
Aspirin use	Ever had discussion about the use of aspirin to prevent heart attack or stroke	Women & men Ages 50–74	Does not have a medical reason, such as an allergy, another medication, or other side effect, for why cannot take aspirin
Blood pressure	During past 24 months, had blood pressure checked	Women & men Age 35+	All persons in recommended population
Cholesterol	Within past 5 years, had cholesterol checked	Women & men Ages 35–74	All persons in recommended population

Preventive service type	Definition, including time period	Population received	Eligibility
Screening and counseling			
Alcohol use	• Within <u>past 12 months</u>, was asked how much and how often drink alcohol • If drink 4 or more drinks for women or 5 or more drinks for men in 1 day, in the last 12 months, was advised to cut back or stop drinking alcohol	Women & men Age 35+	All persons in recommended population

Tobacco use	• Was asked if smoke or use tobacco
	• If smoke or use tobacco every day or some days, in the <u>past 12 months</u>:
	  o advised to quit smoking or using tobacco OR
	  o advised to take a medication to assist with quitting OR
	  o discussed strategies other than medication to assist with quitting
		Women & men Age 35+	All persons in recommended population

Depression screening	In <u>past 12 months</u>, asked about mood, such as whether anxious or depressed	Women & men Age 35+	All persons in recommended population
Obesity	• In <u>past 12 months</u>, was weighed • If obese based on BMI from self-reported height and weight, was given advice about how to manage weight, discuss weight loss goals, or referred to weight loss program to help with diet and exercise	Women & men Ages 35–74	All persons in recommended population
Vaccinations			
Influenza (or "flu")	In <u>past 12 months</u>, had a flu shot or flu vaccine sprayed in nose	Women & men Age 35+	All persons in recommended population
Pneumococcal	<u>Ever</u> had a pneumonia shot	Women & men Ages 65+	All persons in recommended population
Zoster (shingles)	<u>Ever</u> had a shingles vaccine	Women & men Ages 65+	All persons in recommended population
Other preventive services			
Osteoporosis	<u>Ever</u> had bone density measured	Women Ages 65+	Not been told that have had osteoporosis
Screening services that should not be received after age 75 *			
Cervical cancer	Did not have Pap <u>since age 75 and older</u>	Women Age 75+	Did not have a hysterectomy or ever have cervical cancer
PSA	Did not have prostate specific antigen test (PSA) <u>since age 75 and older</u>	Men Age 75+	Did not have prostate cancer

* Preventive services that should not be received, based on USPSTF recommendations.

Sociodemographic characteristics

Education

Education for each person is based on the highest education level completed when entering the MEPS survey.

- *No college*: Persons with less than a high school diploma, a high school diploma, or a GED.

- *Some college*: Persons that have some college, but not a 4-year college bachelor's degree.

- *College degree*: Persons with a 4-year college bachelor's degree or higher (master's, doctorate, or professional degree)

Insurance

Individuals under age 65 were classified in the following three insurance categories, based on household responses to health insurance status questions for 2014:

- *Private*: Individuals who, at any time during the year, had insurance that provides coverage for hospital and physician care (other than Medicare, Medicaid, or other public hospital/physician coverage) were classified as having private insurance. Coverage by TRICARE (Armed Forces-related coverage) was also included as private health insurance. Insurance that provides coverage for a single service only, such as dental or vision coverage, was not included.

- *Public*: Individuals were considered to have public coverage if they met both of the following criteria: 1) they were not covered by private insurance at any time during the year and 2) they were covered by any of the following public programs at any point during the year: Medicare, Medicaid, or other public hospital/physician coverage.

- *Uninsured*: The uninsured were defined as people not covered by private hospital/physician insurance, Medicare, TRICARE, Medicaid, or other public hospital/physician programs at any time during the entire year or period of eligibility for the survey.

Individuals age 65 and older were classified into the following three insurance categories, based on household responses to health insurance status questions for 2014:

- *Medicare and private insurance*: This category includes people classified as Medicare beneficiaries who were also covered by a supplementary private policy at any time during the year.

- *Medicare and other public insurance*: This category includes people classified as Medicare beneficiaries who met both of the following criteria: 1) they were not covered by private insurance at any point during the year, and 2) they were covered by one of the following public programs at any point during the year: Medicaid or other public hospital/physician coverage.

- *Medicare only*: This category includes people classified as Medicare beneficiaries but not classified as Medicare and private insurance or as Medicare and other public insurance. This group includes people who were enrolled in Medicare health maintenance organizations (HMOs) and people who had Medicare fee-for-service coverage only.

Income level

Each sample person was classified according to the total annual income of his or her family. Possible sources of income included annual earnings from wages, salaries, bonuses, tips, and commissions; business and farm gains and losses; unemployment and Workers' Compensation; interest and dividends; alimony, child support, and other private cash transfers; private pensions, individual retirement account (IRA) withdrawals, Social Security and Department of Veterans Affairs payments; Supplemental Security Income and cash welfare payments from public assistance, Aid to Families with Dependent Children, and Aid to Dependent Children; gains or losses from estates, trusts, partnerships, S corporations, rent, and royalties; and a small amount of "other" income. Poverty status is the ratio of family income to the corresponding federal poverty thresholds, which control for family size and age of the head of family. Categories for this analysis are defined as follows:

- *Low income*: Household income below the federal poverty line through 200 percent of the poverty line.

- *Middle income*: Household income over 200 percent to 400 percent of the poverty line.

- *High income*: Household income over 400 percent of the poverty line.

Race/ethnicity

All persons whose main national origin or ancestry was reported in MEPS as Puerto Rican, Cuban, Mexican, Mexican-American, or Chicano, other Latin American or other Spanish, regardless of racial background, were classified as Hispanic. All other persons were classified according to their reported race. For this analysis, the following dichotomous classification by race and ethnicity was used: 1) white non-Hispanic, and 2) all other race/ethnicity (including Hispanic, non-Hispanic black, American Indian, Alaska Native, Asian or Pacific Islander, other race, and multiple races).

About MEPS-HC

The Medical Expenditure Panel Survey Household Component (MEPS-HC) collects nationally representative data on health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. The MEPS-HC is cosponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS). More information about the MEPS-HC can be found on the MEPS Web site at https://meps.ahrq.gov/.

References

1. Maciosek MV, Coffield AB, Edwards NM, Flottemesch TJ, Goodman MJ, Solberg LI. Priorities Among Effective Clinical Preventive Services. *American Journal of Preventive Medicine.* 2006;31(1):52–61.

2. Farley TA, Dalal MA, Mostashari F, Frieden TR. Deaths Preventable in the U.S. by Improvements in Use of Clinical Preventive Services. *American Journal of Preventive Medicine.* 2010;38(6):600–609.

3. Borsky A, Zhan C, Miller T, Ngo-Metzger Q, Bierman AS, Meyers D. Few Americans Receive All High-Priority, Appropriate Clinical Preventive Services. *Health affairs (Project Hope).* 2018;37(6):925–928.

4. Agency for Healthcare Research and Quality. MEPS HC-173: 2014 Preventive Care Self-Administered Questionnaire File. https://meps.ahrq.gov/mepsweb/data_stats/download_data_files_detail.jsp?cboPufNumber=HC-173.

Suggested Citation

***

AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Research Findings report and other MEPS data and tools, and to share suggestions on how MEPS products might be enhanced to further meet your needs. Please email us at MEPSProjectDirector@ahrq.hhs.gov or send a letter to the address below:

Joel W. Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
5600 Fishers Lane, Mailstop 07W41A
Rockville, MD 20857

Table 1. Clinical preventive services by age/sex group

	Women				Men			
	Ages 35–64		Age 65+		Ages 35–64		Age 65+	
	35–49	50–64	65–74	75+	35–49	50–64	65–74	75+
Cancer preventive services								
Breast cancer		X	X					
Cervical cancer	X	X						
Colon cancer		X	X			X	X	
Cardiovascular preventive services								
Aspirin use		X	X			X	X	
Blood pressure	X	X	X	X	X	X	X	X
Cholesterol	X	X	X		X	X	X	
Screening & counseling preventive services								
Alcohol use	X	X	X	X	X	X	X	X
Tobacco use	X	X	X	X	X	X	X	X
Depression screening	X	X	X	X	X	X	X	X
Obesity	X	X	X		X	X	X	
Vaccinations								
Influenza	X	X	X	X	X	X	X	X
Pneumococcal			X	X			X	X
Zoster			X	X			X	X
Osteoporosis screening			X	X				
Services that should not be received after age 75								
Cervical cancer screening				XN				
PSA screening								XN
Count of recommended preventive services	**8**	**11**	**13**	**9**	**7**	**9**	**11**	**8**

Source: Preventive Services Self-Administered Questionnaire survey development documentation
X Clinical preventive services recommended for an age/sex group by the U.S. Preventive Services Task Force (USPSTF) or the Advisory Committee on Immunization Practices.
XN Preventive services that should not be received, based on USPSTF recommendations.

Table 1.1. Number of women ages 35–64 by demographic category and percentage eligible for preventive service, 2015

	Ages 35–64		Ages 50–64 only			
	Population (N)	Cervical cancer (%)	Population (N)	Aspirin use discussion (%)	Breast cancer (%)	Colon cancer (%)
Overall	**62,665,702**	**76.9**	**32,506,956**	**88.9**	**94.7**	**97.3**
Education						
No college	21,924,394	74.7	12,566,217	88.1	94.8	98.0
Some college	19,661,336	70.6	10,061,953	88.9	93.9	94.7
College degree	21,079,972	85.0	9,878,786	90.1	95.5	99.1
Insurance						
Private	45,059,218	73.3	24,160,406	91.2	95.9	97.9
Public	9,423,848	83.2	4,925,339	76.0	89.7	96.4
Uninsured	8,182,636	89.4	3,421,211	91.9	94.1	94.3
Income level						
Low income	19,812,788	83.4	9,471,200	85.8	92.5	95.3
Middle income	19,201,634	75.6	8,994,783	91.7	94.3	97.2
High income	23,651,279	72.5	14,040,973	89.3	96.5	98.8
Race/ethnicity						
White non-Hispanic	42,445,039	73.2	24,404,070	89.0	96.1	96.8
Other race/ethnicity	20,220,663	84.7	8,102,886	88.8	90.7	98.9

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
Aggregate population totals within each category may not add exactly to the overall population due to rounding of person-level weights.

Table 1.2. Percentage of women ages 35–64 receiving recommended preventive services, 2015

	Cancer			Cardiovascular			Screening & counseling				Vaccinations
	Ages 35–64		Ages 50–64	Ages 35–64		Ages 50–64	Ages 35–64				Ages 35–64
	Cervical cancer	Breast cancer	Colon cancer	Blood pressure	Cholesterol	Aspirin use discussion	Alcohol use	Tobacco use	Depression	Obesity	Influenza vaccine
Overall	**75.5**	**72.6**	**61.2**	**88.0**	**83.0**	**33.0**	**42.5**	**64.1**	**45.9**	**68.0**	**43.1**
Education											
No college	69.9	65.7	53.2	80.4	80.4	33.9	32.3	56.6	39.3	61.3	38.3
Some college	74.1	75.1	67.6	90.0	81.2	33.9	40.4	62.8	49.9	64.9	43.1
College degree	81.8	78.7	65.0	94.1	87.4	31.0	55.1	73.2	49.0	77.9	48.2
Insurance											
Private	80.5	77.1	64.4	92.0	87.3	31.2	47.0	69.5	47.0	73.2	46.9
Public	72.7	–	–	89.5	86.0	–	38.6	64.3	54.7	74.1	52.8
Uninsured	55.8	–	–	64.5	56.0	–	22.7	34.6	29.7	32.5	11.2
Income level											
Low income	72.9	63.7	55.9	78.7	73.9	38.5	33.7	54.7	44.1	58.9	37.3
Middle income	74.5	74.2	63.7	91.6	85.3	25.1	39.4	61.9	45.9	66.6	36.5
High income	78.9	77.4	63.0	93.0	88.8	34.6	52.5	73.9	47.4	76.8	53.4
Race/ethnicity											
White non-Hispanic	77.8	72.5	61.3	91.6	87.1	34.6	48.4	70.9	53.9	71.1	46.7
Other race/ethnicity	71.3	73.1	61.0	80.5	74.5	28.0	30.2	50.0	29.0	61.5	35.7

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
– Estimates suppressed due to inadequate precision (fewer than 60 persons or relative standard error greater than 50 percent).

Table 2.1. Number of women age 65 and older by demographic category and percentage eligible for preventive service, 2015

	Age 65+		Ages 65–74 only			
	Population (N)	Osteoporosis (%)	Population (N)	Aspirin use discussion (%)	Breast cancer (%)	Colon cancer (%)
Overall	**26,778,014**	**64.9**	**14,749,090**	**86.2**	**90.8**	**96.7**
Education[1]						
No college	13,018,655	61.6	6,041,851	82.2	94.7	95.1
Some college	8,293,902	64.2	4,652,956	90.8	88.3	98.5
College degree	5,403,024	74.1	3,991,850	87.5	87.8	97.1
Insurance[2]						
Medicare only	9,347,778	59.5	5,051,766	85.0	90.5	96.8
Medicare and private	12,969,173	68.9	6,992,290	89.1	88.9	95.9
Medicare and other public	3,697,523	60.1	2,109,575	76.7	95.3	98.6
Income level						
Low income	10,616,086	67.4	4,968,400	77.8	92.5	96.2
Middle income	7,727,659	59.9	4,243,363	87.8	89.8	98.6
High income	8,434,269	66.2	5,537,327	92.4	90.1	95.8
Race/ethnicity						
White non-Hispanic	20,997,789	64.7	11,036,754	88.6	90.3	97.2
Other race/ethnicity	5,780,225	65.5	3,712,335	79.2	92.4	95.2

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
Aggregate population totals within each category may not add exactly to the overall population due to rounding of person-level weights.
[1] Education category: 2 cases excluded (weighted population of 62,433) due to missing education levels.
[2] Insurance category: 14 cases excluded (weighted population of 763,541) who were not reported to have Medicare coverage during 2014.

Table 2.2. Percentage of women age 65 and older receiving recommended preventive services, 2015

	Cancer		Cardiovascular			Screening & counseling				Vaccinations			Other
	Ages 65–74	Age 65+	Ages 65–74			Age 65+			Ages 65–74	Age 65+			Age 65+
	Breast cancer	Colon cancer	Blood pressure	Aspirin use discussion	Cholesterol	Alcohol use	Tobacco use	Depression	Obesity	Influenza vaccine	Pneumococcal vaccine	Zoster vaccine	Osteo-porosis
Overall	**77.0**	**73.2**	**93.2**	**58.9**	**93.5**	**43.3**	**62.8**	**43.1**	**72.8**	**69.2**	**67.3**	**38.9**	**63.2**
Education													
No college	74.6	71.0	94.8	63.8	93.2	36.1	57.0	41.6	70.4	67.7	65.7	31.3	49.0
Some college	76.6	70.9	89.6	58.6	89.6	45.9	67.8	39.2	70.7	66.0	71.6	42.2	66.7
College degree	81.5	79.3	95.0	51.8	98.3	55.9	68.8	52.5	79.0	78.2	64.5	52.7	87.4
Insurance													
Medicare only	73.9	68.0	93.5	52.0	92.0	39.3	59.9	37.2	68.6	62.8	65.4	35.8	58.7
Medicare and private	78.1	78.5	94.0	63.8	95.8	45.7	65.8	46.5	76.3	77.3	73.9	45.6	68.5
Medicare and other public	76.3	65.7	89.9	–	89.9	39.9	56.7	47.4	66.1	58.2	51.7	24.6	–
Income level													
Low income	73.4	68.8	92.5	57.6	90.9	36.0	56.3	40.3	70.6	66.0	65.5	33.9	47.2
Middle income	75.1	73.7	93.1	66.0	91.6	41.1	63.2	50.0	72.9	72.0	70.8	36.0	67.5
High income	81.7	76.7	94.2	54.6	97.2	54.4	70.7	40.5	74.7	70.7	66.3	47.9	80.1
Race/ethnicity													
White non-Hispanic	76.6	76.5	92.6	56.4	93.1	44.9	65.3	44.4	71.2	71.1	71.1	42.3	67.2
Other race/ethnicity	78.0	62.9	95.3	67.1	94.6	37.3	53.8	38.5	77.4	62.6	53.5	26.5	48.9

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
– Estimates suppressed due to inadequate precision (fewer than 60 persons or relative standard error greater than 50 percent).

Table 3.1. Number of men ages 35–64 by demographic category and percentage eligible for preventive service, 2015

	Ages 35–64	Ages 50–64 only		
	Population (N)	Population (N)	Aspirin use discussion (%)	Colon cancer (%)
Overall	**59,306,107**	**30,652,767**	**94.7**	**96.5**
Education[1]				
No college	24,674,971	13,345,924	91.9	95.3
Some college	15,893,288	8,326,062	96.8	97.9
College degree	18,557,566	8,800,500	97.0	96.9
Insurance				
Private	43,501,173	23,367,967	96.1	96.5
Public	7,188,362	3,605,941	85.2	97.6
Uninsured	8,616,572	3,678,859	95.2	95.2
Income level				
Low income	16,712,164	7,703,167	90.8	92.9
Middle income	16,766,983	7,976,829	95.4	99.0
High income	25,826,960	14,972,772	96.5	97.0
Race/ethnicity				
White non-Hispanic	38,651,102	22,726,882	96.9	97.2
Other race/ethnicity	20,655,005	7,925,886	88.6	94.4

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
Aggregate population totals within each category may not add exactly to the overall population due to rounding of person-level weights.
[1] Education category: 2 cases excluded (weighted population of 180,282) due to missing education levels.

![MEPS logo]

Table 3.2. Percentage of men ages 35–64 receiving recommended preventive services, 2015

	Cancer	Cardiovascular			Screening & counseling				Vaccinations
	Ages 50–64	Ages 35–64		Ages 50–64	Ages 35–64				Ages 35–64
	Colon cancer	Blood pressure	Cholesterol	Aspirin use discussion	Alcohol use	Tobacco use	Depression	Obesity	Influenza vaccine
Overall	**56.2**	**80.3**	**76.0**	**42.6**	**34.7**	**56.3**	**32.7**	**55.8**	**37.2**
Education									
No college	47.8	74.7	68.9	40.6	30.0	50.9	26.9	47.8	30.0
Some college	59.0	79.8	71.6	45.7	33.2	53.0	29.6	52.9	33.1
College degree	66.2	88.2	88.8	42.3	42.5	66.3	42.9	68.7	50.5
Insurance									
Private	61.2	83.9	80.2	45.2	37.6	61.2	34.5	59.0	41.9
Public	–	82.7	84.5	–	41.4	57.2	43.9	62.6	35.7
Uninsured	–	60.6	47.4	–	14.4	30.6	14.4*	34.3	14.3*
Income level									
Low income	52.4	72.6	64.0	35.6	27.0	46.6	28.6	52.3	32.4
Middle income	47.0	77.2	76.1	37.4	35.4	52.5	28.2	46.3	31.9
High income	63.1	87.4	83.6	48.7	39.2	65.0	38.2	64.3	43.6
Race/ethnicity									
White non-Hispanic	59.6	84.9	78.1	44.6	38.9	63.4	35.9	57.9	36.0
Other race/ethnicity	46.4	71.8	72.0	36.3	26.8	43.0	26.7	52.1	39.3

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
– Estimates suppressed due to inadequate precision (fewer than 60 persons or relative standard error greater than 50 percent).
* Relative standard error is greater than 30 percent, indicating low precision for these estimates.

22

Table 4.1. Number of men age 65 and older by demographic category and percentage eligible for preventive service, 2015

	Age 65+	Ages 65–74 only		
	Population (N)	Population (N)	Aspirin use discussion (%)	Colon cancer (%)
Overall	**21,650,379**	**12,981,136**	**86.4**	**91.6**
Education[1]				
No college	9,411,123	5,029,140	86.5	89.0
Some college	5,087,128	3,206,519	91.3	93.4
College degree	7,067,707	4,705,925	82.9	93.0
Insurance[2]				
Medicare only	7,365,740	3,994,753	85.1	90.9
Medicare and private	11,902,939	7,386,969	88.6	90.6
Medicare and other public	1,650,214	867,928	87.3	95.2
Income level				
Low income	6,652,812	3,204,933	83.9	92.3
Middle income	5,927,779	3,149,480	91.4	97.5
High income	9,069,787	6,626,723	85.3	88.4
Race/ethnicity				
White non-Hispanic	17,261,764	10,390,063	86.0	91.1
Other race/ethnicity	4,388,615	2,591,073	88.0	93.6

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
Aggregate population totals within each category may not add exactly to the overall population due to rounding of person-level weights.
[1] Education category: 2 cases excluded (weighted population of 84,421) due to missing education levels.
[2] Insurance category: 14 cases excluded (weighted population of 731,486) who were not reported to have Medicare coverage during 2014.

Table 4.2. Percentage of men age 65 and older receiving recommended preventive services, 2015

	Cancer	Cardiovascular			Screening & counseling				Vaccinations		
	Ages 65–74	Age 65+	Ages 65–74		Age 65+			Ages 65–74	Age 65+		
	Colon cancer	Blood pressure	Aspirin use discussion	Cholesterol	Alcohol use	Tobacco use	Depression	Obesity	Influenza vaccine	Pneumococcal vaccine	Zoster vaccine
Overall	**76.5**	**96.7**	**71.6**	**94.8**	**51.6**	**69.4**	**46.8**	**74.3**	**71.3**	**64.3**	**36.6**
Education											
No college	67.4	95.4	68.8	90.1	47.0	63.0	41.7	72.9	69.7	59.9	25.7
Some college	75.5	97.4	73.1	96.0	51.6	69.3	43.3	74.3	65.0	58.0	26.8
College degree	87.2	98.0	73.4	99.1	57.9	77.7	56.1	76.6	77.7	74.1	58.5
Insurance											
Medicare only	75.3	93.5	73.5	92.1	50.0	66.5	42.1	73.9	67.9	62.4	29.8
Medicare and private	77.4	98.8	72.5	96.4	54.7	74.0	49.1	77.2	77.3	68.9	42.5
Medicare and other public	–	–	–	–	–	–	–	–	–	–	–
Income level											
Low income	73.1	94.9	62.9	94.9	43.4	64.7	44.4	79.3	70.5	57.5	26.5
Middle income	66.1	96.3	71.3	93.3	50.5	69.2	47.4	68.1	75.3	64.6	33.1
High income	83.8	98.2	75.9	95.6	58.4	73.0	48.1	74.9	69.3	68.9	46.2
Race/ethnicity											
White non-Hispanic	76.6	97.0	73.3	95.6	54.0	72.9	49.3	72.8	72.6	68.2	39.0
Other race/ethnicity	76.5	95.6	64.8	91.8	42.4	55.6	36.7	80.5	66.4	48.7	27.0

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
– Estimates suppressed due to inadequate precision (fewer than 60 persons or relative standard error greater than 50 percent).

Table 5.1. Percentage of persons age 75 and older not receiving non-recommended preventive services, 2015

	Population	Percentage eligible	Percentage not receiving screening
Cervical cancer screening **Women, age 75+**	12,028,925	54.3	68.3
PSA screening **Men, age 75+**	8,669,242	73.4	50.2

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2015
Note: Sample size too small for comparisons for each demographic group.