Nonsubstantive Change Request

RAPID SURVEYS SYSTEM

OMB No. 0920-1408, Expiration Date 06/30/2026

Contact Information:

Stephen Blumberg, PhD

Division of Health Interview Statistics National Center for Health Statistics/CDC 3311 Toledo Road Hyattsville, MD 20782 301.458.4107 (voice) 301.458.4035 (fax) <u>swb5@cdc.gov</u>

May 14, 2025

Table of Contents

1. Circumstance Making the Collection of Information Necessary	3
2. Purpose and Use of Information Collection	4
12. Estimates of Annualized Burden Hours and Costs	4
15. Explanation for Program Changes or Adjustments	5
Appendix A: Content Justification from Sponsors	6

Attachment A: Rapid Surveys System Round 7 Questionnaire

Rapid Surveys System – Round 7

This is a request for approval of a nonsubstantive change to the Rapid Surveys System (RSS) (OMB No. 0920-1408, Exp. Date 06/30/2026), conducted by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). This nonsubstantive change requests is for the seventh round of the RSS.

A. Justification

1. Circumstance Making the Collection of Information Necessary

Section 306 of the Public Health Service (PHS) Act (42 U.S.C.), as amended, authorizes that the Secretary of Health and Human Services (HHS), acting through NCHS, collect data about the health of the population of the United States.

RSS collects data on emerging public health topics, attitudes, and behaviors using cross-sectional samples from two commercially available, national probability-based online panels. The RSS then combines these data to form estimates that approximate national representation in ways that many data collection approaches cannot. The RSS collects data in contexts in which decision makers' need for time-sensitive data of known quality about emerging and priority health concerns is a higher priority than their need for statistically unbiased estimates.

The RSS complements NCHS's current household survey systems. As quicker turnaround surveys that require less accuracy and precision than CDC's more rigorous population representative surveys, the RSS incorporates multiple mechanisms to carefully evaluate the resulting survey data for their appropriateness for use in public health surveillance and research (*e.g.*, hypothesis generating) and facilitate continuous quality improvement by supplementing these panels with intensive efforts to understand how well the estimates reflect populations at most risk. The RSS data dissemination strategy communicates the strengths and limitations of data collected through online probability panels as compared to more robust data collection methods.

The RSS has three major goals: (1) to provide CDC and other partners with time-sensitive data of known quality about emerging and priority health concerns; (2) to use these data collections to continue NCHS's evaluation of the quality of public health estimates generated from commercial online panels; and (3) to improve methods to communicate the appropriateness of public health estimates generated from commercial online panels.

The RSS is designed to have several rounds of data collection each year with data being collected by two contractors with probability panels. A cross-sectional national sample will be drawn from the online probability panel maintained by each of the contractors.

Each round's questionnaire will consist of four main components: (1) basic demographic information on respondents to be used as covariates in analyses; (2) new, emerging, or supplemental content proposed by NCHS, other CDC Centers, Institutes, and Offices, and other

HHS agencies; (3) questions used for calibrating the survey weights; and (4) additional content selected by NCHS to evaluate against relevant benchmarks. NCHS will use questions from Components 1 and 2 to provide relevant, timely data on new, emerging, and priority health topics to be used for decision making. NCHS will use questions from Components 3 and 4 to weight and evaluate the quality of the estimates coming from questions in Components 1 and 2. Components 1 and 2 will contain different topics in each round of the survey.

2. Purpose and Use of Information Collection

In the seventh round of the RSS, contributed content includes content on barriers to access for lung cancer screening, GLP-1 prescriptions and usage, Lyme disease prevention methods, and complementary and integrative health.

NCHS calibrates survey weights from the RSS to gold standard surveys. Questions used for calibration in this round of RSS, over and above the standard demographic variables, will include social and work limitation, employment, health information technology use, telephone use, marital status, language used at home and in other settings, and civic engagement. All these questions have been on the National Health Interview Survey (NHIS) in prior years allowing calibration to these data.

Finally, several questions that were previously on NHIS, the National Survey of Family Growth (NSFG), and other suitable federal surveys will be used for benchmarking to evaluate data quality. For these purposes, all panelists in the RSS will be asked health status, life satisfaction, chronic conditions, diabetes, veteran status, healthcare access and utilization, mental health, and body mass index. Female panelists will be asked about their pregnancy history and family planning.

The questionnaire for round 7 is included as Attachment A, and the content justification is included as Appendix A within this document.

12. Estimates of Annualized Burden Hours and Costs

A.Time Estimates

This nonsubstantive change request seeks approval to the OMB data collection that was approved on 06/30/2023 (OMB# 0920-1408, expires 06/30/2026). The average burden for the seventh-round survey cycle is shown in the table below.

The NCHS RSS Round 7 (2025) data collection is based on 8,000 complete surveys (2,664 hours) and 20 cognitive interviews (20 hours) using the same survey instrument. The total number of responses is 8,020 and the total burden is 2,684 hours.

Estimated Annualized Burden Hours

Type of	Form Name	Number of	Number of	Average	Total
Respondents		Respondents	Responses	Burden per	Burden
			per	Response (in	
			Respondent	hours)	
Adults 18+	Survey: NCHS	8,000	1	20/60	2,664
	RSS Round 7				
Adult 18+	Cognitive	20	1	1	20
	Interviews				
Total					2,684

B. Cost to Respondents

At an average wage rate of \$35.21 per hour, the estimated annualized cost for the 2,684 burden hours is \$94,504 for Round 7.

Estimated Annualized Burden Costs

Total Burden	Hourly Wage	Total
Hours	Rate	Respondent
2,684	\$35.21	\$94,504

15. Explanation for Program Changes or Adjustments

There is no additional burden. The burden is included in the original submission that was approved on June 30, 2023.

Appendix A: Justifications for Content from Sponsors

The new, emerging, or supplemental content in this round of RSS includes the following topic areas:

- 1. Barriers to Access for Lung Cancer Screening
- 2. GLP-1 Prescription and Usage
- 3. Complementary and Integrative Health
- 4. Lyme Disease Prevention Methods

The justification for each of these topic questions follows. Each of the topic areas must meet criteria for at least one of the four possible reasons for inclusion of a topic area in RSS:

1) Time-sensitive data needs

2) **Public health attitudes and behaviors** (e.g., opinions, beliefs, stated preferences, and hypotheticals)

3) **Developmental work** to improve concept measurement/questionnaire design

4) **Methodological studies** to compare, test, and develop approaches to data collection and analysis

Barriers to Access for Lung Cancer Screening

Program: National Center for Chronic Diseases Prevention and Health Promotion (NCCDPHP), Division of Cancer Prevention and Control (DCPC)

Background/Rationale

Lung cancer is the leading cause of cancer death in the United States. It is estimated that 9 of every 10 cases of lung cancer are caused by cigarette smoking or secondhand smoke exposure. Tobacco prevention and cessation interventions can substantially reduce lung cancer incidence and mortality. However, a potential unintended consequence of these efforts may be the stigmatization of people who smoke or who have been diagnosed with lung cancer. Smoking may be perceived as a socially unacceptable lifestyle choice, leading to both internal and external blame for lung cancer diagnosis.

The newly released Surgeon General's Report, *Eliminating Tobacco-Related Disease and Death: Addressing Disparities*, highlights cigarette smoking as the leading cause of lung cancer and describes persistent disparities in tobacco use. Smoking cessation and lung cancer screening are, respectively, effective risk reduction and early detection strategies for control of lung cancer, but barriers exist to both. Of note, there is limited information on psychosocial and sociocultural barriers to lung cancer screening—including how knowledge of screening guidelines and stigma of tobacco use and lung cancer may play a role.

The primary objective of this proposal is to examine awareness of screening guidelines and stigmatizing attitudes as potential barriers to lung cancer screening. The proposed items address CDC priorities around prevention and detection of disease. The proposal also addresses each of Division of Cancer Prevention and Control's three strategic priorities to prevent cancer, ensure all people get the right screening at the right time, and improve health and wellbeing of cancer survivors.

Proposed Use of the Data

The data will be analyzed and disseminated through multiple channels, including reports for publication.

- RSS data will be used to examine the prevalence of different barriers to lung cancer screening.
- RSS data will be used by researchers, practitioners, and providers to understand how to improve screening uptake.
- RSS data will also improve our understanding of perceptions of smoking and of people diagnosed with lung cancer, including the potential role of stigma on disclosure of smoking status to healthcare provider.
- RSS data will inform non-stigmatizing messaging related to lung cancer diagnosis, including interventions to improve patient-provider communication and enhance shared decision making.

Justification for Rapid Surveys

These estimates will inform our understanding of **public health attitudes and behaviors** regarding lung cancer screening recommendation, barriers to receiving lung cancer screenings for those who are eligible, and attitudes towards people who smoke and are diagnosed with lung

cancer. These estimates will also provide key information on patient-provider communications that is critical to enhancing shared decision making.

Concepts Measured

- Smoked 100 cigarettes in entire life
- Age when started smoking cigarettes regularly
- Current smoker
- Age when last smoked cigarettes regularly
- Average cigarettes smoked per day
- Ever been asked if smoked cigarettes
- Ever chosen not to share smoking status
- Reasons for not sharing smoking status
 - **o** Negative impact on insurance
 - **o** Did not want to be judged negatively by doctor
 - **o** Did not want to be treated differently by doctor
 - **o** Did not want lecture from doctor
 - **o** Felt ashamed about smoking
 - **o** Wasn't ready to quit smoking
 - **o** Some other reason
- Ever been told you have lung cancer
- Awareness of lung cancer screening recommendation
- Ever talk with doctor about benefits of lung cancer scan
- Ever talk with doctor about harms of lung cancer scan
- Ever have low dose CT scan of chest area
- Was most recent low dose CT scan for lung cancer screening
- Reason for not have low dose CT scan for lung cancer screening
 - o Not recommended
 - **o** Currently healthy
 - **o** Fear of judgement
 - Hard to find time
 - **o** Hard to find reliable transportation
 - **o** Concerned about radiation exposure from scan
 - **o** Concerned about other harms from scan
 - **o** Low risk of getting lung cancer
 - **o** Knowing results would make anxious
 - **o** Concerned about screening cost
 - **o** Some other reason
- Smoking and lung cancer stigma
 - **o** People with lung cancer are to blame for illness
 - **o** People with lung cancer have made poor lifestyle choices
 - **o** Risk of lung cancer for nonsmokers
 - Assume people with lung cancer were smokers

Duplication and measurement on other national surveys

The current data on barriers to lung cancer screening are primarily qualitative in nature or do not come from large-scale surveys that can produce population-level estimates.

Proposed Data Dissemination

Estimates and the microdata will be made publicly available. These include an online interactive dashboard where users can select pre-tabulated estimates including standard errors/confidence intervals, and a public-use file. All of these analytic products will include transparent information regarding any known limitations and data quality. In particular, the documentation will indicate that Rapid Surveys is not designed to replace NCHS' higher-quality established data collections, and it will highlight key methodological differences that may increase the risk of bias in Rapid Surveys estimates. Following the round, each data collection contractor will produce a methodology report that describes the composition and representativeness of the sample.

<u>References</u>

U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool. Released in June 2024. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Cancer Institute; <u>https://www.cdc.gov/cancer/dataviz</u>

U.S. Department of Health and Human Services. The health consequences of smoking—50 years of progress: A report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014.

Riley KE, Ulrich MR, Hamann HA, Ostroff JS. Decreasing smoking but increasing stigma? Anti-tobacco campaigns, public health, and cancer care. *AMA J Ethics*. May 1 2017;19(5):475-485. doi:10.1001/journalofethics.2017.19.5.msoc1-1705

Rohan EA, Boehm J, Allen KG, Poehlman J. In their own words: A qualitative study of the psychosocial concerns of posttreatment and long-term lung cancer survivors. *J Psychosoc Oncol*. May-Jun 2016;34(3):169-83. doi:10.1080/07347332.2015.1129010

Marlow LA, Waller J, Wardle J. Variation in blame attributions across different cancer types. *Cancer Epidemiol Biomarkers Prev.* Jul 2010;19(7):1799-805. doi:10.1158/1055-9965.EPI-09-1298

American Lung Association. Addressing the stigma of lung cancer. American Lung Association; Accessed July 8, 2024. <u>https://www.lung.org/getmedia/54eb0979-4272-4f43-be79-9bef36fab30b/ALA-Stigma-of-LC-2020-V1.pdf</u>

U.S. Preventive Services Task Force. Lung cancer screening. Accessed 2023, January 17. https://uspreventiveservicestaskforce.org/uspstf/recommendation/lung-cancer-screening

GLP-1 Prescription and Usage

Program: National Center for Chronic Diseases Prevention and Health Promotion (NCCDPHP), Division of Nutrition, Physical Activity, and Obesity (DNPAO)

Background/Rationale

GLP-1 receptor agonists (GLP-1s) are a highly effective class of prescription drugs that help manage weight, blood sugar, and other chronic disease symptoms. In the last 3 years, the FDA approved additional GLP-1 based medications (e.g., semaglutide, tirzepatide) for the indication of chronic weight management (common brand names: Wegovy, Zepbound). GLP-1 based medications, among others, are part of an evidence-based multi-component approach to treat obesity, which currently affects more than 40% of US adults.

Patterns of GLP-1 based medication use, access, and barriers are analytic priorities of CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). NCCDPHP currently has a cross-division work group and analytic agenda dedicated to trying to surveil GLP-1 based medications to describe trends and highlight the burden, gaps, and unintended consequences with the intent of promoting safe and appropriate use and equal access. There is currently little to no detailed, time-sensitive survey information about patients' GLP-1 use, source, access issues, or adverse events. In addition, large electronic health record data leave gaps in understanding knowledge, attitudes, and behaviors, represent only healthcare-seeking individuals, and are not geographically representative. NCHS Rapid Surveys System would help fill critical gaps in this emerging and highly important health topic.

Understanding which GLP-1 based medications people are taking, source of their GLP-1 based medications, whether and how access to GLP-1 based medications has been disrupted, and whether they stopped or reduced use of these medications due to GLP-1-related side effects is important for informing public health messaging, responding to inquiries, and surveilling this emerging and priority health topic. There are currently no existing surveillance systems that capture these outcomes, and though electronic health record data can provide some information, it cannot be used to assess knowledge, attitudes, or behaviors, nor provide geographically representative information.

Proposed Use of the Data

- RSS data will be used to inform public messaging around GLP-1 medication use.
- RSS data will be used to inform health systems, public health and healthcare practitioners, patients and policymakers about GLP-1 medications, source of medication fills, extent of insurance coverage, and barriers to use including cost, shortages, and side effects.
- RSS data will help CDC understand current GLP-1-related behaviors as well as individuals' experience with access issues, side effects, and use of compounded medications.
- RSS data may be used to inform public messaging around GLP-1 medication use and barriers.
- The results of the RSS may be communicated to scientific colleagues, healthcare professionals, and the public health community through:
 - 0 Scientific manuscript submissions. Specifically, RSS data will be used to:

- Estimate the prevalence and likelihood of GLP-1 use, overall and by respondent characteristics such as sex, race, health insurance status/type, and BMI category
- Among those who report taking a GLP-1, describe the prevalence of having disruptions to GLP-1 use (e.g., delaying a fill) and reasons for disruption (e.g., cost, shortage), by respondent characteristics such as demographics and health insurance status/type
- Among those who report taking a GLP-1, explore the prevalence of discontinuation or reduction of use due to side effects, overall and by medication type (compounded vs. not), receipt of prescription from doctor (yes vs. no), and other characteristics
- Estimate the prevalence of obesity, overall and by respondent characteristics such as sex, race, health insurance status/type, and BMI category
- Explore concurrence of self-perception of weight, self-report of obesity, and BMI category based on self-reported height and weight
- Presentations at relevant conferences.
- **o** Dissemination to partner organizations, including state and local health departments.

Justification for Rapid Surveys

This **time sensitive** data will be essential to track the increase in GLP-1 use, barriers to use, sources of access, and side effects from use. Recent studies have shown a drastic increase in GLP-1 dispensing in the last 2-3 years. In addition, active surveillance systems have detected an uptick of GLP-1-related emergency department visits for nausea, vomiting, hypoglycemia, and other side effects of GLP-1 use or misuse. Further, high drug costs, limited availability, insufficient insurance coverage, and other barriers have resulted in gaps in access as well as the emergence of compounded medications, improper dosing, and other unintended consequences.

Concepts Measured

- Currently have high blood pressure
- Ever have high cholesterol
- Currently have high cholesterol
- Ever have cardiovascular disease
- Currently have cardiovascular disease
- Ever have obesity
- Currently have obesity
- Ever have sleep apnea
- Currently have sleep apnea
- Currently have diabetes
- Self-description of weight
- Talked to doctor about losing weight to improve health
- Past 12-month use of GLP-1 medication
- Current use of GLP-1 medication
- Currently prescribed GLP-1 medication
- Doctor provided nutrition specific advice with GLP-1 prescription
- Doctor provided physical activity specific advice with GLP-1 prescription
- GLP-1 medication access

- **o** Primary care doctor or specialist, filled at a pharmacy
- **o** Online health and wellness program
- **o** Online medication service
- **o** Medical spa or cosmetic medical center
- **o** Somewhere else
- Use of compounded GLP-1 medication
- Barriers to GLP-1 medication access
 - **o** Skip doses of GLP-1 medication
 - Due to cost
 - Due to availability
 - o Took less of GLP-1 medication
 - Due to cost
 - Due to availability
 - **o** Delayed filling GLP-1 prescription
 - Due to cost
 - Due to availability
- Insurance coverage of GLP-1 medication
- Stopped or reduced usage of GLP-1 medications due to side effects

Duplication and measurement on other national surveys

Currently there is no detailed nor nationally representative information from patients about their use of GLP-1 based medications, whether they are compounded, accessibility or other barriers, or adverse events. There are a few publications on GLP-1 prescriptions and access issues, but none that we know of on compounded medications.

There is some work in the CDC Division of Healthcare Quality Promotion using emergency department data on adverse events related to GLP-1s, but the level of detail in that analysis is unknown.

Electronic Health Records and claims datasets track trends in GLP-1 based medications and other obesity medication prescriptions and fills. However, these data leave gaps in understanding knowledge, attitudes, and behaviors, represent only healthcare-seeking individuals (GLP-1s can be accessed "illicitly" outside of the healthcare system), and are not geographically representative.

The National Health Interview Survey and the Behavioral Risk Factor Surveillance System both have limited questions either included or proposed to be included on their data collection, but both lack the level of detail this data collection would provide.

Proposed Data Dissemination

Estimates and the microdata will be made publicly available. These include an online interactive dashboard where users can select pre-tabulated estimates including standard errors/confidence intervals, and a public-use file. All of these analytic products will include transparent information regarding any known limitations and data quality. In particular, the documentation will indicate that Rapid Surveys is not designed to replace NCHS' higher-quality established data collections, and it will highlight key methodological differences that may increase the risk

of bias in Rapid Surveys estimates. Following the round, each data collection contractor will produce a methodology report that describes the composition and representativeness of the sample.

References

Lee JM, Sharifi M, Oshman L, Griauzde DH, Chua K. Dispensing of Glucagon-Like Peptide-1 Receptor Agonists to Adolescents and Young Adults, 2020-2023. *JAMA*. 2024;331(23):2041–2043.

Alsuhibani A, Alrasheed M, Gari M, Hincapie AL, Guo JJ. Descriptive analysis of reported adverse events associated with anti-obesity medications using FDA Adverse Event Reporting System (FAERS) databases 2013-2020. Int J Clin Pharm. 2022 Feb;44(1):172-179.

Sodhi M, Rezaeianzadeh R, Kezouh A, Etminan M. Risk of Gastrointestinal Adverse Events Associated With Glucagon-Like Peptide-1 Receptor Agonists for Weight Loss. JAMA. 2023 Nov 14;330(18):1795-1797.

Complementary and Integrative Health

Program: National Institutes of Health (NIH) National Center for Complementary and Integrative Health (NCCIH)

Background/Rationale

Complementary and integrative health (CIH) focuses on approaches not typically included as a part of conventional medical care or approaches that may have origins outside of the usual Western practices. Complementary health focuses on the use of non-mainstream approaches together with conventional medicine, while integrative health focuses on bringing conventional and complementary approaches together in a coordinated way. Researchers are currently exploring the potential benefit of complementary and integrative health in a variety of situations including pain management, relief of cancer symptoms, and promotion of healthy behaviors.

The mission of the National Center for Complementary and Integrative Health (NCCIH) is to define, through rigorous scientific investigation, the usefulness and safety of complementary and integrative health interventions and their roles in improving health and health care, and a current priority for NCCIH is restoring overall health. Recent trends from the National Health Interview Survey (NHIS) show an increasing use of CIH techniques (e.g. yoga, meditation, use of a chiropractor.) Age-adjusted rates among adults show that in 2017, 14.3% of adults reported using yoga, 14.2% reported using meditation, and 10.3% reported using a chiropractor, compared to 9.5%, 4.1%, and 9.1% respectively in 2012. Use of CIH techniques appears to vary across insurance status and geographic groups. Data from the 2002 and 2012 NHIS show that the use of acupuncture, chiropractic, and massage therapy increased among adults who did not have health insurance coverage for these approaches. Adults who saw practitioners for acupuncture and chiropractic approaches and had insurance, were more likely to have partial coverage than complete.

Proposed Use of the Data

In 2027, the NHIS will again feature a section on Complementary and Integrative Health (CIH) techniques. To be included, specific CIH techniques need to be sufficiently prevalent to permit reliable estimates. Preliminary prevalence estimates on complementary and integrative health practices that are derived from RSS will help to determine if the estimates are large enough to achieve sufficient precision if included on the 2027 NHIS CIH section. Specific practices to be evaluated in this manner include visits to traditional or folk healers or shamans; visits to practitioners of homeopathy, energy healing, and acupuncture; and recent use of art therapy, Tai chi, and Qi Gong for health purposes.

Justification for Rapid Surveys

NCCIH has sponsored questions about traditional medicine, homeopathy, energy healing, and acupuncture practitioners in the 2002, 2007, and 2012 NHIS, however, these items have not been included in more recent administrations due to insufficient prevalence (<1.0%). RSS data collected in this **developmental** and **methodological study** will be used to improve the design of the 2027 NHIS questionnaire and develop appropriate content for data collection and analysis.

Concepts Measured

- Past 12 months, seen Ayurvedic Doctor or Vaidya, Curandero, Hierbero or Yerbera, Native American Healer/Medicine Man, Shaman, Sobador
- Past 12 months, seen practitioner of Homeopathy
- Past 12 months, seen practitioner for energy healing/ Reiki
- Past 12 months, seen practitioner for acupuncture
 - **o** How many times
 - **o** Any cost covered by insurance
- Past 3 months, create, practice, or perform music or other art forms
- Past 12 months, practice Tai Chi
- Past 12 months, practice Qi Gong

Duplication and measurement on other national surveys

Data on these topics has been collected on the NHIS as part of the Complementary and Integrative Health section since 2002. All content prior to 2022 NHIS (2002, 2007, 2012, and 2017) was identified as CAM – Complementary and Alternative Medicine. Music and art therapy were included on the NHIS for the first time in 2022. Sponsored content on CAM/CIH is included on the NHIS every five years on years ending in "2" or "7."

There are limited other sources for this data outside the National Health Interview Survey.

Proposed Data Dissemination

This content area is being explored in RSS for strictly methodological purposes. Population prevalence estimates will not be treated as official statistics, nor will they be made public.

NCHS will provide NIH NCCIH with methodological tables that show prevalence of various types of CIH techniques. This information will be used to determine if the use of CIH techniques is common enough in the general population for estimates to achieve sufficient precision if these questions are included on the 2027 NHIS.

References

Barnes PM, Bloom B, Nahin RL. Complementary and alternative medicine use among adults and children: United States, 2007. National health statistics reports. 2008(12):1-23.

Clarke TC, Barnes PM, Black LI, Stussman BJ, Nahin RL. Use of Yoga, Meditation, and Chiropractors Among U.S. Adults Aged 18 and Over. NCHS data brief. 2018(325):1-8.

Nahin RL, Barnes PM, Stussman BJ. Insurance Coverage for Complementary Health Approaches Among Adult Users: United States, 2002 and 2012. NCHS data brief. 2016(235):1-8.

Clarke TC, Black LI, Stussman BJ, Barnes PM, Nahin RL. Trends in the use of complementary health approaches among adults: United States, 2002–2012. National health statistics reports. 2015(79):1.

Lyme Disease Prevention Methods

Program: National Center for Emerging and Zoonotic Infectious Disease (NCEZID), Division of Vector-Borne Disease (BVBD)

Background/Rationale

Lyme disease is a bacterial disease caused by the bite of an infected black-legged (deer) tick that causes mostly mild illness. In 2023, over 89,000 cases were reported to CDC by state health departments as part of routine surveillance efforts. However, recent estimates using other methods indicate that almost half a million people in the United States are diagnosed and treated for Lyme annually. It is treatable with antibiotics but can be hard to diagnose, which can then lead to long-lasting or severe illness for some people.

Currently, the only way to prevent Lyme disease is by avoiding tick bites through personal protective behaviors such as using insect repellent, checking for ticks, and wearing protective clothing when going outside in an area with ticks. There is also the option to take a single dose of an antibiotic after receiving a tick bite to prevent disease, but this requires seeing a healthcare provider within 72 hours of the tick bite.

However, a new vaccine for the prevention of Lyme disease is in phase 3 clinical trials and is therefore expected to enter the U.S. market as early as 2026. In anticipation of this new prevention option, CDC hopes to better understand the public's likelihood to perform various protective behaviors, including vaccination if it were available.

Proposed Use of the Data

RSS data will be used to inform public messaging and information campaigns. Likelihood of various protective behaviors will be compared and contrasted against other prevention methods and estimates will be analyzed overall and by state of residence (high-incidence states versus all other states).

Justification for Rapid Surveys

These **time-sensitive** data will be important to CDC's understanding of how open the public are to annual vaccination against Lyme and to other prevention methods such as use of antibiotics and insect repellents. This will help CDC to prepare public messaging and public-facing information to help the public understand the benefits and risks of various prevention methods. Because Lyme prevention is primarily undertaken during black-legged tick season, it is essential to collect this information during the summer months.

Concepts Measured

- Reside in state with high incidence of Lyme disease
- Likelihood of using Lyme prevention methods
 - Vaccination (if available)
 - o Antibiotics after tick bite
 - Insect repellent while in areas with ticks
 - Pre-treatment of clothing with permethrin

Duplication and measurement on other national surveys

The current data on attitudes toward Lyme disease prevention methods are primarily qualitative in nature or are focused on specific groups such as parents/caregivers and people residing in high-incidence areas. There is no currently available data on this topic from nationally representative surveys.

Proposed Data Dissemination

Estimates and the microdata will be made publicly available. These include an online interactive dashboard where users can select pre-tabulated estimates including standard errors/confidence intervals, and a public-use file. All of these analytic products will include transparent information regarding any known limitations and data quality. In particular, the documentation will indicate that Rapid Surveys is not designed to replace NCHS' higher-quality established data collections, and it will highlight key methodological differences that may increase the risk of bias in Rapid Surveys estimates. Following the round, each data collection contractor will produce a methodology report that describes the composition and representativeness of the sample.

<u>References</u>

Beck, A., Bjork, J., Biggerstaff, B. J., Eisen, L., Eisen, R., Foster, E., Signs, K., Tsao, J.I., Kough, E., Peterson, M., Schiffman, E., Muganda, C.P., Osborn, R., Wozniak, R., Bron, G.M., Phaneuf, D., Smith, D., Bartholomay, L., Paskewitz, S., Hinckley, A.F. Knowledge, attitudes, and behaviors regarding tick-borne disease prevention in Lyme disease-endemic areas of the Upper Midwest, United States, Ticks and Tick-borne Diseases, Volume 13, Issue 3, 2022, 101925, ISSN 1877-959X, <u>https://doi.org/10.1016/j.ttbdis.2022.101925</u>.

Devchand R, Koehler L, Hook S, Marx GE, Hooks H, Schwartz A, Hinckley A. Understanding consumer and clinician perceptions of a potential Lyme disease vaccine. Health Educ Res. 2022 Jan 27;36(5):494-504. DOI: 10.1093/her/cyab032.

Hook, S. A., Jeon, S., Niesobecki, S. A., Hansen, A. P., Meek, J. I., Bjork, J....Hinckley, A. F. (2022). Economic Burden of Reported Lyme Disease in High-Incidence Areas, United States, 2014–2016. Emerging Infectious Diseases, 28(6), 1170-1179. https://doi.org/10.3201/eid2806.211335.

Kugeler KJ, Earley A, Mead PS, Hinckley AF. Surveillance for Lyme Disease After Implementation of a Revised Case Definition — United States, 2022. MMWR Morb Mortal Wkly Rep 2024;73:118–123. DOI: <u>http://dx.doi.org/10.15585/mmwr.mm7306a1.</u>

Wormser, G.P., Dattwyler, R.J., Shapiro, E.D., Halperin, J.J., Steere, A.C., Klempner, M.S., Krause, P.J., Bakken, J.S., Strle, F., Stanek, G., Bockenstedt, L., Fish, D., Dumler, J.S., Nadelman, R.B. The Clinical Assessment, Treatment, and Prevention of Lyme Disease, Human Granulocytic Anaplasmosis, and Babesiosis: Clinical Practice Guidelines by the Infectious Diseases Society of America, Clinical Infectious Diseases, Volume 43, Issue 9, 1 November 2006, Pages 1089–1134, <u>https://doi.org/10.1086/508667</u>

(A correction has been published: Clinical Infectious Diseases, Volume 45, Issue 7, 1 October 2007, Page 941, <u>https://doi.org/10.1086/521856</u>)