Gonococcal Isolate Surveillance Project

OMB 0920-0307

Supporting Statement – Part A

REVISION

July 20, 2018

Sancta St. Cyr
Project Officer

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of STD Prevention
Surveillance & Data Management Branch
Centers for Disease Control and Prevention
1600 Clifton Road NE, Mailstop E-63
Atlanta, GA 30329

Voice: (404)718-5447
Fax: (404)639-8610
Email: oew3@cdc.gov

GONOCOCCAL ISOLATE SURVEILLANCE PROJECT

0920-0370

Section A.

Justification.

1. Circumstances Making the Collection of Information Necessary
2. Purpose and Use of the Information Collection
3. Use of Improved Information Technology and Burden Reduction
4. Efforts to Identify Duplication and Use of Similar Information
5. Impact on Small Businesses or Other Small Entities
6. Consequences of Collecting the Information Less Frequently
7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5
8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency
9. Explanation of Any Payment or Gift to Respondents
10. Protection of the Privacy and Confidentiality of Information Provided by Respondents
11. Institutional Review Board (IRB) and Justification for Sensitive Questions
12. Estimates of Annualized Burden Hours and Costs
13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers
14. Annualized Cost to the Federal Government
15. Explanation for Program Changes or Adjustments
16. Plans for Tabulation and Publication and Project Time Schedule
17. Reason(s) Display of OMB Expiration Date is Inappropriate
18. Exceptions to Certification for Paperwork Reduction Act Submissions

TABLES

LIST OF ATTACHMENTS

1. Authorizing Legislation - Public Health Service Acts, Section 301 and Section 318
2. 60 Day Federal Register Notice
    a. 2a. 60 Day FRN Public Comments
3. Data Collection forms/files
        3a1. Demographic/Clinical Data – used by sentinel sites completing core activities (form)
        3a2. Demographic/Clinical Data – used by sentinel sites completing core and enhanced activities (csv file)
        3b. Antimicrobial Susceptibility Testing Results – used by regional laboratories (csv file)
        3b2. Instructions for Control Strain Susceptibility Testing
4. Screen shots of web-based application
5. IRB Determination
    a. 5a. GISP
    b. 5b. enhanced GISP
6. Project Personnel
        6a. CDC Participants
        6b. Sentinel Clinic and Regional Laboratory List
7. Data Coding Guide
8. Justification for collection of sensitive information
9. Changes to the Information Collection
10. Privacy Impact Assessment (PIA)

• Goal of the study: The Gonococcal Isolate Surveillance Project (GISP) was created in 1986 to monitor trends in antimicrobial susceptibilities of *N. gonorrhoeae* strains in the United States. To increase capacity to detect and monitor resistant gonorrhea and improve the specificity of GISP, this submission is a revision to include collection of additional isolates and data elements.
• Intended use of the resulting data: Data from GISP are used to guide national recommendations on treatment of gonorrhea.

• Currently, data & specimens are collected at 30 participating sentinel sites (STD clinics) where healthcare providers obtain urethral *N. gonorrhoeae* isolates from the first 25 men with urethral gonorrhea each month; isolates are shipped each month to a regional laboratory for antimicrobial susceptibility testing. Under this revision, in 10 of the 30 clinical sites, additional specimens will be collected (i.e., endocervical specimens from women and extragenital specimens from men and women) and sent to a regional laboratory for susceptibility testing; four additional data elements will be collected for these specimens. Additionally, in those 10 clinical sites, isolates that are culture positive for *N. gonorrhoeae*, but are negative by nucleic acid amplification test will be collected and sent to a regional laboratory. The number of regional laboratories has been reduced from five to four.

• Under this revision, the subpopulations to be studied will be expanded from just men with urethral gonorrhea to include male and female patients attending a participating STD specialty clinic in the United States who are diagnosed with a confirmed or presumptive gonococcal infection.

• Data will be analyzed using trend analyses to identify changes in the burden of antibiotic resistance and cross-sectional analyses to identify risk factors for resistance.

Section A. JUSTIFICATION

1. Circumstances Making the Collection of Information Necessary

The Division of STD Prevention (DSTDP), National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC) requests OMB to approve a revision to the currently approved version of 0920-0307, Gonococcal Isolate Surveillance Project (GISP) (expiration 8/31/2019). The purpose of this revision is to continue collection of surveillance data on antimicrobial resistance in *Neisseria gonorrhoeae*. These data are used by public health officials at the national, state, and local level to determine appropriate therapy for gonorrhea.

This revision includes collection of additional isolates and a limited number of additional data elements at a subset of participating sites to increase the timeliness of detection of new resistant strains. Additionally, the number of laboratories has been reduced from 5 to 4 and the data collection and processes have been streamlined to minimize burden. Requested changes to this ICR are further outlined in section 15 of this document and in **Attachment 9**.

Approximately 800,000 persons require treatment for gonorrhea annually in the United States.[1] Without treatment, gonorrhea can result in pelvic inflammatory disease, infertility, and ectopic pregnancy, and can also facilitate HIV transmission. Gonorrhea control in the United States relies on prompt and effective antimicrobial therapy. However, treatment is complicated by the ability of *Neisseria gonorrhoeae* to develop antimicrobial resistance. Since its inception in 1986, GISP has been a unique national sentinel surveillance system that monitors trends in antimicrobial susceptibilities of *N. gonorrhoeae* in the United States and plays an integral role in guiding national treatment recommendations and national policy. The programs and data collection are authorized by the Public Health Service Act, Sec. 301 and 318 (42 USC 241 and 247c) (**Attachment 1**).

In 2013, *N. gonorrhoeae* was designated as an urgent antibiotic resistance threat in the United States by CDC and is a priority of the 2014 *National Strategy for Combating Antibiotic-Resistant Bacteria*.[4] A fundamental component of the National Strategy is strengthening surveillance and this revision describes activities designed to strengthen surveillance of antimicrobial resistant *N. gonorrhoeae* to inform interventions and mitigate the spread of resistance.

Historically, healthcare providers at ~30 participating sentinel sites (i.e., STD clinic or multiple STD clinics affiliated with a single public health department) obtain urethral *N. gonorrhoeae* isolates from the first 25 men with urethral gonorrhea each month. There may be occasional month-to-month variability in the number of isolates submitted; a sentinel site may provide >25 isolates in any given month to make up for providing <25 isolates in other months. The overall goal is for each site to provide at least 300 isolates per year. Isolates are shipped each month to a regional laboratory for antimicrobial susceptibility testing.

GISP has consistently provided robust data that allow monitoring of resistance trends and inform updates to treatment guidelines. However, GISP samples <4% of reported male gonorrhea cases in the United States. This relatively limited scope likely limits the speed with which new resistance patterns are found and with which public health officials can respond. Expanding the number of isolates collected in GISP is expected to allow public health officials to detect and respond to resistance more quickly. In addition, GISP only samples urethral isolates. Published data suggest that resistance in *N. gonorrhoeae* might develop initially in non-genital anatomic sites, such as the pharynx.[2] It has also been hypothesized that susceptibility patterns may be different among women.[3] Including isolates from the pharynx and other anatomic sites, as well as from women, is expected to also support public health efforts to detect and respond to resistance more quickly.

GISP surveillance can also be strengthened by ensuring that GISP surveillance is only being conducted on *N. gonorrhoeae* and not on other similar bacteria, such as *Neisseria meningitidis,* that can cause clinical syndromes that are indistinguishable from gonorrhea. Identifying isolates that are culture positive for *N. gonorrhoeae,* but negative by nucleic acid amplification tests (a more specific diagnostic test) will ensure that non-gonococcal bacteria are excluded from GISP data, strengthening the accuracy and usefulness of GISP data.

To improve and strengthen GISP surveillance, this revision allows for a subset of sentinel sites (10 out of 30 sites) to conduct enhanced surveillance activities, collecting additional isolates (including from the pharynx, rectum, and cervix of exposed persons) with a limited number of additional data elements. We anticipate that ~45 additional isolates per month will be collected by each of these 10 sites (total ~70 isolates per month per site). All isolates will be shipped each month to a regional laboratory for antimicrobial susceptibility testing. When isolates that appear to be bacteria other than *N. gonorrhoeae* are identified at one of the ten sentinel sites

conducting enhanced surveillance, the isolate will be shipped to the regional laboratory and then to CDC. Based on informal discussions with current GISP sentinel sites, we anticipate that approximately 10 such isolates will be identified at each site per year. Finally, the number of regional laboratories has been reduced from five to four.

Under this revision, there will be a change in annualized burden as 10 sentinel sites will be conducting enhanced GISP activities in addition to core activities, the number of specimens has increased and the number of data elements has increased. The number of participating regional laboratories had been reduced from five to four.

Under this revision, the data collection and processes have been streamlined to minimize burden. All demographic/clinical data from the sentinel sites (**Attachment 3a1/ Attachment 3a2**) and antimicrobial susceptibility testing results from the regional laboratories (**Attachment 3b)**, will be submitted electronically (1) directly from the sentinel site to the GISP data manager at CDC through a secure data portal, (2) through a secure GISP-web based application, or (3) through the CDC Secure Access Management Services partner portal. To minimize burden, comma-separated values (csv) files that provide standardized structure of the electronic data are provided to sentinel sites and laboratories. Additionally, to further minimize burden, the regional laboratories will be able to extract electronic data from electronic laboratory information systems instead of hand entering data and will no longer be required to report control strain testing results.

The GISP website (http://www.cdc.gov/std/gisp/) features information about GISP, program documents, and links to data reports. No data are collected on the website. The website does not contain information or pages directed at children under the age of thirteen years. This revision does not contain any changes to the GISP website.

2. Purpose of Use of the Information Collection

The purpose of GISP is to monitor trends in antimicrobial resistance in *N. gonorrhoeae* strains in the United States in order to establish a scientific basis for the selection of gonococcal therapies and to allow proactive changes to treatment guidelines before widespread resistance and failures of treatment occur. Overall GISP data are reported in the annual CDC STD Surveillance Report (http://www.cdc.gov/std/stats16/default.htm) and site-specific data are reported in the GISP Site Profiles (https://www.cdc.gov/std/stats15/gisp2015/default.htm).

CDC has designated *N. gonorrhoeae* as one of three "urgent" antibiotic resistance threats in the United States.[5] Responding to and monitoring antibiotic-resistant *N. gonorrhoeae* is a priority of the *National Strategy for Combating Antibiotic Resistant Bacteria*.[4] This revision directly responds to the *National Strategy for Combating Antibiotic Resistant Bacteria* by improving and strengthening surveillance of antimicrobial resistance through GISP. Additionally, data from GISP will also allow CDC to monitor and evaluate the effectiveness of public health interventions conducted to support the *National Strategy for Combating Antibiotic-Resistant Bacteria*.

GISP provides essential and unique data on gonococcal resistance patterns in the United States. Many non-GISP laboratories now use non-culture based tests to diagnose gonorrhea; without culture, the organism is not available for antimicrobial susceptibility testing. Thus, GISP fills critical surveillance needs. Without data from GISP, it would not be possible to know whether recommended antimicrobial therapies for gonorrhea remain effective over time. Without such information, both effective treatment and control of gonorrhea transmission would be jeopardized. By including data from multiple anatomic sites of infections, this revision will increase public health efforts to detect and respond to resistance more quickly.

Information from GISP is continually used as the basis for revising gonococcal treatment recommendations. Data from GISP are clearly impactful: GISP data have directly contributed to CDC STD Treatment Guidelines in 1993, 1998, 2002, 2004, 2006, 2007, 2010, 2012, and 2015, multiple recent reports, and the landmark CDC report, *Antibiotic Threats in the United States, 2013*.[5-19] GISP data from 2005 to June 2006 indicated increased prevalence of fluoroquinolone-resistant *N. gonorrhoeae* (QRNG), which prompted CDC to no longer recommend empiric treatment for gonococcal infections with fluoroquinolones.[20] Several years later, data from GISP collected during 2006 to 2011 indicated increasing prevalence of isolates with elevated minimum inhibitory concentrations of cefixime.[13,14] Based on these data, CDC updated treatment recommendations for gonococcal infections to no longer recommend cefixime as first-line therapy.[13] Based on the high prevalence of tetracycline resistance in GISP, CDC no longer recommended use of doxycycline (an antibiotic similar to tetracycline) as part of dual therapy for gonorrhea.[6] It is also possible that timely changes to treatment guidelines in response to subtle changes in resistance may actually help to stall or reverse the emergence of resistance, highlighting the importance of rapid identification of new resistance patterns.

Despite the success of GISP over the last 30 years in effectively changing treatment guidelines to respond to the

emergence of resistance, *N. gonorrhoeae* continues to develop new resistance patterns, as the number of new antibiotics continues to decline.[22] There is now only a single remaining recommended treatment regimen for gonorrhea[6] making surveillance of emerging resistance critical.

3. Use of Improved Information Technology and Burden Reduction

Under this revision, all demographic/clinical data from the participating sentinel sites (**Attachment 3a1/Attachment 3a2**) and antimicrobial susceptibility testing data (**Attachment 3b**) from the regional laboratories, will be submitted electronically either (1) directly from the sentinel site to the GISP data manager at CDC through a secure data portal, (2) through a secure GISP-web based application, or (3) through the CDC Secure Access Management Services partner portal. 100% of the responses are gathered electronically. To minimize burden, comma-separated values (csv) files that provide standardized structure of the electronic data are provided to sites (**Attachments 3a2 and 3b).** Additionally, to further minimize burden, the regional laboratories will be able to extract electronic data from electronic laboratory information systems instead of hand entering data.

4. Efforts to Identify Duplication and Use of Similar Information

The principal investigators and co-investigators have completed a thorough review of the literature, and there is no similar system to monitor antimicrobial resistance in *N. gonorrhoeae* at the national level or regional level.

5. Impact on Small Business or Other Small Entities

Respondents include sentinel sites (STD clinical sites) and public health laboratories. Data/information collection instruments have been held to the absolute minimum of questions required for intended use of the data/information, computer-based forms are used for collecting data/information and respondents are permitted to report data electronically to reduce burden and improve data quality. Respondents apply to participate in GISP and participate voluntarily.

6. Consequences of Collecting the Information Less Frequently

Past experience indicates that gonococcal resistance patterns can change rapidly. Therefore, the GISP protocol requests monthly reporting by sentinel sites in order to: (1) monitor emergence of new antimicrobial resistance or sudden changes in antimicrobial resistance trends, and (2) ease the burden of specimen processing for the participating laboratories. For these laboratories, it is easier to process isolates on an ongoing basis rather than store, process, and report them on a quarterly or annual basis.

After GISP detects an increase in suspected antimicrobial resistance patterns, appropriate responses (i.e., changes in guidelines, implementation of new therapeutic regimens, etc.) must be developed. With enhanced GISP specimen collection and quicker detection of new resistance, even more timely changes to treatment guidelines are possible (and help to avert consequences of untreated gonorrhea, such as pelvic inflammatory disease and infertility). In addition, quicker detection of new resistance might allow public health responses to act quickly to contain the spread of resistant strains. There are no legal obstacles to reduce the burden.

7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

This request fully complies with the regulation 5 CFR 1320.58.
Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

A. A 60-day Federal Register notice was published in the *Federal Register* on February 5, 2018, Vol. 83, No. 24, pages 5102-5103 (**Attachment 2**). CDC received two non-substantive comments (**Attachment 2a**) and replied to both with a standard CDC response.

B. GISP is a collaborative project among CDC investigators, regional laboratories, and 30 sentinel sites (STD clinics located around the United States). Frequent consultations between CDC and persons outside CDC regarding the availability of data, frequency of collection, clarity of instructions, and data elements to be recorded have taken place via: 1) site visits to participating sentinel sites and regional

laboratories; 2) bi-monthly meetings of GISP co-investigators; 3) e-mail communications among all personnel participating in GISP activities; 4) webinars for participating sentinel sites; and 5) informal discussions by phone held with nearly all participating sentinel sites about availability of data and barriers to data collection.

9. Explanation of Any Payment or Gift to Respondents

No payment or gift is provided to respondents.

10. Protection of the Privacy and Confidentiality of Information Provided by Respondents

The CDC Privacy Officer has assessed this package for applicability of 5 U.S.C. § 552a, and has determined that the Privacy Act applies to the information collected because there is a unique identifier assigned to the patient. The applicable System of Records Notice (SORN) is “09-20-0136: Epidemiologic Studies and Surveillance of Disease Problems. HHS/CDC,” published in the Federal Register on December 31, 1992 (Vol. 57, No. 252, pp. 62812-62813. This project will not collect name, social security number, or date of birth, but the Patient ID is a unique patient identifier assigned by the site that allows for linking of multiple isolates from a single person at a single clinic visit and across multiple clinic visits, and is provided to CDC for purposes of enhanced surveillance. The Patient ID number is used to facilitate communication between CDC and a reporting area when needed. Sensitive information such as sex of sex partners, HIV status, sex work exposure, and injection drug use is collected. The Patient ID serves as an identifier variable that will enable isolate and surveillance data to be linked back to patient identities, therefore personally identifiable information (PII) can be retrieved by an identifier assigned to an individual.

For the ten sites conducting enhanced GISP data and specimen collection, additional data elements will be collected, including a unique patient identifier that will be assigned by the sentinel site. This identifier will be created for the purposes of surveillance and will not be a medical record number nor will it include PII. Patient data are obtained through review of medical records by the clinic staff and include collection of demographic/clinical information. All PII is retained by the STD clinics that treated the patient and is not recorded with data sent to CDC or regional laboratories.

At sites where enhanced surveillance will not occur isolates are collected from patients as part of their routine care when a gonorrhea infection is suspected. A unique number is assigned to each isolate. Isolates are assigned sequential identifiers for each month. Each identifier is composed of a three-letter designation for the STD clinic site, followed by a six-digit number indicating the year and month, and a two-digit number in the sequence from 01 through 25.

A current Privacy Impact Assessment (PIA) is included in this information collection request. The objective of the PIA is to systematically identify the risks and potential effects of collecting, maintaining, and disseminating personally identifiable information (PII) and to examine and evaluate alternative processes for handling that information to mitigate potential privacy risks and risks to confidentiality.

The electronic GISP database is stored on the CDC mainframe computer and only approved Division of STD Prevention (DSTDP) staff have access rights to the data.

11. Institutional Review Board (IRB) and Justification for Sensitive Questions

IRB Approval

GISP, including enhanced data and specimen collection activities, has been determined to not involve research involving human subjects and IRB approval is not required (**Attachment 5a/Attachment 5b**).

Cases of gonorrhea are routinely reported in all state health departments, and patient information is routinely collected by state, county, and city health departments' STD program personnel for purposes of disease control. The clinical and demographic patient data collected (**Attachment 3a1/ Attachment 3a2, Attachment 7**) are a subset of this routinely collected information and information collected in the medical record.

Sensitive Questions

The sensitive questions in the demographic/clinical data include: Sex of sex partners, previous history of gonorrhea, HIV status, travel history, prior antimicrobial use, history of giving or receiving drugs or money for sex, and recreational

drug use. (**Attachment 7**) These are elicited at participating STD clinics in a private environment and recorded by STD clinicians in order to assess behavioral and biological risk of infection, to guide appropriate behavioral counseling, and to determine the appropriate anatomic sites for STD testing or screening.[6] These items are asked for all STD infections and not specifically for GISP. These sensitive questions are essential in order to develop an accurate surveillance picture of disease in the community and to provide appropriate clinic care for each patient. These questions have been critically important for GISP in identifying epidemiological risk factors for antibiotic resistant gonorrhea. (**Attachment 8**)

Sex of sex partner and *recreational drug use* identify increased risk of gonorrhea — including transmission of resistant strains — in certain populations known to be at high risk for STDs. Men who have sex with men are at elevated risk for acquisition of resistant strains.[15,16,23]

Previous history of gonorrhea is useful in determining whether antimicrobial resistance is more likely to emerge in core groups of individuals who have frequent gonococcal infections and are treated with antimicrobials frequently.[25,26]

HIV status is useful for identifying increased transmission of resistant strains among certain immunosuppressed populations who may be engaging in risky sexual behavior. As data from GISP have demonstrated, HIV infection in some men might be a marker of heightened risk for acquisition of resistant *N. gonorrhoeae* strains.[23]

Travel history, *prior antimicrobial use*, *history of giving or exchanging drugs or money for sex*, and *recreational drug use* have been associated with increased risk for infection with resistant gonorrhea and are risk factors associated with emergence of resistance.[23-26]

12. Estimated Annualized Burden Hours and Costs

Under this revision, there will be a change in burden as 10 sentinel sites will conduct enhanced surveillance in addition to the core activities, as these 10 sites will collect additional specimens and data elements, the total burden has increased. Although the overall burden for the laboratories has increased due to the increased number of specimens, data collection by the laboratories has been streamlined by eliminating hand entry of data for electronic data for submission which reduced the average burden per response.

For the 20 sentinel sites participating only in core activities, clinics are asked to provide 25 isolates and associated

demographic/clinical data per month. However, due to low volume at some sites in certain months, we expect an average of 20 isolate submissions per sentinel site per month for an estimated annual total of 240 isolates per sentinel site (20 isolates/month * 12 months). In total, from the sentinel sites participating only in core activities there will be an average of 400 isolate submissions per month (20 sentinel sites * 20 isolates/month) and average of 4,800 isolate submissions annually (400 isolates/month * 12 months).

For the 10 sentinel sites conducting enhanced specimen and data collection in addition to the core activities, we expect an average of 70 isolate submissions per sentinel site per month for an estimated annual total of 840 isolates per sentinel site (70 isolates/month * 12 months). These estimates are based on projections by the sentinel sites and serve as the basis for calculating burden hours and cost to respondents. In total, from the sentinel sites participating in enhanced and core activities, there will be an average of 700 isolate submissions per month (10 sentinel sites * 70 isolates/month) and average of 8,400 isolate submissions annually (700 isolates/month * 12 months).

Across the 30 participating sentinel sites (20 conducting core activities and 10 conducting core and enhanced activities), there will be an average of 1,100 isolate submissions per month (400 isolates from the 20 core sentinel sites + 700 isolates from the 10 enhanced sentinel sites) and average of 13,200 isolate submissions annually (1,100 isolates/month * 12 months).

All isolates collected will be tested monthly by four regional laboratories. Each laboratory will test approximately 3,300 isolates annually (13,200 isolates per year / 4 labs) and 275 isolates monthly (3,300 isolates / 12 months).

For collection of demographic/clinical data and antimicrobial susceptibility data, a "response" is defined as the data collection/processing and laboratory processing associated with an individual isolate from an individual patient.

Each of the 20 sentinel sites that conduct core GISP activities will submit demographic/clinical data for the 20 isolates on a monthly basis or a total of 240 responses annually. (**Attachment 3a1**). The estimated time for clinic personnel to abstract these demographic/clinical data is 11 minutes per response. The estimated annual burden for these 20 sites is 880 hours per year.

Each of the 10 sentinel sites that will conduct enhanced GISP specimen and data collection in addition to core activities will submit demographic/clinical data on approximately 70 isolates on a monthly basis or 840 responses annually. As four additional data elements will be collected for these isolates, the estimated time for clinic personnel to abstract data for enhanced data collection is 12 minutes per response (**Attachment 3a2**) for a total annual burden across all sites of 1,680 hours.

On average, 1,100 isolates will be submitted monthly by the clinical sites for antimicrobial susceptibility testing; therefore, each of the four participating laboratories will provide test results for approximately 275 isolates month or 3,300 isolates annually. This revision allows for laboratories to extract data from electronic databases for submission to CDC to streamline data reporting. (**Attachment 3b**) Combined with the estimated time for laboratories to conduct antimicrobial susceptibility testing, the total the estimated time for each participating laboratory per response is 40 min. Total Annual burden is estimated as 8,800 hours annually.

Each of the 4 Regional laboratories will test 4 sets of 3 control strains each month or 12 sets of control strains annually (4 sets x 12 months = 48). It takes approximately 5 minutes to process one set of 3 control strains. (See **Attachment 3b2**, Instructions.) To minimize burden, this revision eliminates the separate reporting of Control Strain Testing results. Total Annual burden for Control Strain Testing is estimated as 16 hours annually.

Thus, the estimated annualized burden across GISP is 11,376 hours.

Table A.12-1: Estimated Annualized Burden Hours

Type of Respondent	Form Name	No. of Respondents	No. of Responses per Respondent	Average Burden per Response (in hours)	Total Burden Hours
Sentinel site conducting core surveillance	Demographic/ Clinical Data (Attachment 3a1)	20	240	11/60	880
Sentinel site	Demographic/ Clinical Data	10	840	12/60	1,680

conducting enhanced surveillance	(Attachment 3a2)				
Regional laboratory	Antimicrobial Susceptibility Testing Results (Attachment 3b)	4	3,300	40/60	8,800
Regional laboratory	Control Strain Susceptibility Testing	4	48	5/60	16
Total		34			11,376

Use of the GISP software web application or secure partner portal discussed in Item A.3 might reduce the burden required for clinic respondents when submitting demographic/clinical data. However, the time to record responses manually was used to calculate the burden.

Costs to respondents are incurred in purifying, storing and forwarding isolates to regional laboratories; transferring data from medical records to GISP forms; entering the data into an electronic database locally (some clinics are currently not able to do this); and forwarding the information to CDC.

All respondents are paid through federal funds** so there is no additional cost to them to provide the isolates/data. However, in order to calculate the cost to the respondents, the average hourly wage rate for a clerk at the sentinel site (rates based on salary for Information and Record Clerk, All Other; $19.28/hour) and a lab technician (rates based on salary for Medical and Clinical Laboratory Technicians; $20.05/hour) from the U.S. Bureau of Labor Statistics May 2016 National Occupational Employment and Wage Estimates (available: https://www.bls.gov/oes/2016/may/oes_nat.htm)

The total estimated annualized burden cost to respondents is $226,117.

Table A.12-2.Estimated Annualized Burden Costs

Type of Respondent	Form Name	No. of Respondents	No. of Responses per Respondent	Average Burden per Response (in hours)	Average Hourly Wage	Total Burden Cost

Sentinel site conducting core surveillance	Demographic/ Clinical Data (Attachment 3a1)	20	240	11/60	$19.28	$16,966
Sentinel site conducting enhanced surveillance	Demographic/ Clinical Data (Attachment 3a2)	10	840	12/60	$19.28	$32,390
Regional laboratory	Antimicrobial Susceptibility Testing Results (Attachment 3b)	4	3,300	40/60	$20.05	$176,440
Regional laboratory	Control Strain Susceptibility Testing	4	48	5/60	$20.05	$321
Total		34				$226,117

** Respondents are paid through federal funds from the CDC Improving Sexually Transmitted Disease Programs through Assessment, Assurance, Policy Development, and Prevention Strategies (STD AAPPs) Grant and Epidemiology and Laboratory Capacity (ELC) Grant.

13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers

There will be no direct costs to the respondents other than their time to participate in each information collection.

14. Annualized Cost to the Federal Government

The total annualized cost to the government is $1,176,900. The total cost to the government over the 3-year period is $3,530,700.

Table A.14: Estimated Annualized Costs to the Federal Government

Expense Type	Expense Explanation	Annual Costs (dollars)
Direct Costs to the Federal Government	CDC Data Manager (GS-13, .5 FTE)	$46,000
	CDC Laboratory Personnel (GS-15, .05 FTE)	$6,000
	CDC Laboratory Personnel (GS-13, .10 FTE)	$8,000
	CDC Laboratory Personnel (GS-12, .20 FTE)	$12,000
	CDC Laboratory Personnel (GS-11, .6 FTE)	30,000
	CDC Laboratory Personnel (GS-9, .7 FTE)	$27,000
	CDC Epidemiologist (GS-15, .7 FTE)	$65,100
	CDC Project Coordinator (GS-11, .7 FTE)	$38,500
	Subtotal, Direct Costs to the Government	$232,600
Travel and other related expenses	Travel, supplies, and annual GISP report	$ 54,300
	Subtotal, Travel and other project-related expenses	$54,300
Federal Grant	Improving Sexually Transmitted Disease Programs through Assessment, Assurance, Policy Development, and Prevention Strategies (STD AAPPs) Grant	$ 190,000
	Epidemiology Laboratory Capacity Grant	$ 700,000
	Subtotal, Federal Grant	$890,000
	TOTAL COST TO THE GOVERNMENT	$1,176,900

15. Explanation for Program Changes or Adjustments

The Gonococcal Isolate Surveillance Project (GISP) is the only national and regional surveillance system that monitors *Neisseria gonorrhoeae* antimicrobial susceptibility. Because *N. gonorrhoeae* resistance continues to emerge and fewer antimicrobial drugs are being brought to market, GISP is a critically important surveillance system. The project aims to continue to improve the way that surveillance is conducted. The current OMB approval expires on 2/28/2019. GISP is transitioning to a new funding mechanism that includes the enhanced surveillance eGISP. Due to a new notice of funding opportunity (NOFO), a revision request is being made at this time instead of later in 2018.

This Revision involves a net increase in annualized burden, from 8,628 burden hours to 11,376 burden hours (+2,748). The number of sentinel sites (N=30) has not changed, but sentinel sites have been divided into two groups: those conducting core surveillance (N=20) and those that will receive additional CDC funding to conduct enhanced surveillance (N=10). There is no change in burden for the 20 sentinel sites conducting core surveillance, but burden will increase for the 10 sites participating in enhanced surveillance. Estimates for each group are now provided in separate information collections. Enhanced surveillance also results in an increase in burden for the regional laboratories that perform antimicrobial resistance testing. The changes in respondent burden are described in more detail below, along with the rationale for each change and the measures taken to minimize burden, where applicable.

A. Decrease in the number of sentinel sites participating in core surveillance information collection

   In the previous approval period, burden was based on the participation of 30 sentinel sites. On average, each site submitted 240 urethral isolates per year (20 isolates per month x 12 months) to a designated regional lab. The isolates were drawn from the first 20 male patients seen by the site each month who were thought to be infected with *N. gonorrhoeae*. The estimated burden per response (11 minutes) also included the submission of standard clinical and demographic data about these patients to CDC. In this Revision, core surveillance will continue to be conducted by 20 sites. There are no changes to the number of isolates submitted per site or the clinical and demographic data variables, however, the reduced number of sentinel sites results in a decrease of 440 burden hours (10 x 240 x 11/60) for core surveillance.

B. Enhanced surveillance information collection at 10 sentinel sites

   Ten (10) sentinel sites will conduct enhanced surveillance which builds on the core surveillance activity. Enhanced surveillance is represented as a new information collection in this Revision ICR. The rationale for each component of enhanced surveillance and its impact on burden is summarized below.

   1) Increase in the number of isolates submitted for antimicrobial resistance testing

Overall, the GISP has sampled <4% of reported male gonorrhea cases in the United States. This relatively limited scope likely limits the speed at which new resistance patterns are found and with which public health officials can respond. With enhanced surveillance, each sentinel site will increase the average number of isolates submitted per month from 20 to 70 (increase of 50 isolates per month). Therefore, each site participating in enhanced surveillance will submit an average of 840 isolates per year (70 isolates per month x 12 months). Expanding the number of isolates collected in GISP is expected to allow public health officials to detect and respond to resistance more quickly.

2) Changes to sampled patients and anatomic site of infection

Core surveillance sites exclusively submit urethral isolates from male patients. Sites participating in enhanced surveillance will submit isolates from male patients, female patients, and additional anatomic sites of infection. NCHHSTP is making this change because published data suggest that resistance in *N. gonorrhoeae* might develop initially in non-genital anatomic sites, such as the pharynx. Sentinel sites will begin including isolates from the pharynx and other anatomic sites which is expected to also support public health efforts to detect and respond to resistance more quickly.

3) Additional clinical and demographic data elements

Five (5) new data elements will be incorporated into the clinical and demographic reporting requirements for enhanced surveillance (**Attachment 3a2**). These data elements include the anatomic site of infection, patient ID, specimen ID, NAAT result, and meningococcal vaccination history. The patient ID is a unique site-assigned patient ID code (not PII). If >1 isolate originates from a single patient, the patient ID code will allow data analysts to incorporate that information into the data analysis. Sex of patient and sex of sex partner were previously collected in GISP. These data elements are changing to gender of patient and gender of sex partner to help NCHHSTP better track patient sex and sex of sex partner in a more detailed way. These changes would improve the understanding of GISP patient

populations and risk factors associated with gonococcal infections and antibiotic resistance. The estimated burden per response will increase from 11 minutes to 12 minutes.

The total estimated annualized burden for enhanced surveillance is 1,680 hours (10 sentinel sites x 850 isolates per site x 12 minutes per response). Of this total, 440 hours would have been incurred if the 10 sites had continued participating at the core surveillance level, 40 hours would be needed to upgrade the clinical and demographic data elements at the core level of participation (240 isolates per year), and 1,200 hours are attributable to increasing the number of isolates per year (N=600) and submitting enhanced clinical and demographic information on these isolates.

Summary of Changes that Affect Sentinel Sites

	Type of Respondent	Type of data elements	Number of Respondents	Number of respondents per respondent	Average burden per response	Total burden hours
Previous approval	All sentinel sites	Standard clinical and demo-graphic data elements (Attach-ment 3a1)	30	240	11/60	1,320
Revision request	Core surveillan ce sites	Standard clinical and demo-graphic data elements (Attach-ment 3a1)	20	240	11/60	880
	Enhanced surveillan ce sites	Standard clinical and demo-graphic data elements	10	240	11/60	440
		+4 data elements for 20 isolates per month	10	240	1/60	40
		Standard	10	600	12/60	1,200

		clinical and demo-graphic data elements +5 data elements for addition-al 50 isolates per month (Attach-ment 3a2)				

C. Increase in burden for antimicrobial resistance testing

Specialized laboratory testing that can tell the difference between N*. gonorrhoeae* and other similar bacteria, such as *Neisseria meningitides,* strengthens the accuracy and usefulness of GISP data by allowing data analysts to exclude other non-gonococcal bacteria from surveillance reports about *N. gonorrhoeae*. Antimicrobial resistance testing is then conducted to identify isolates that show resistance to antibiotic therapies. Findings are used to monitor patterns of resistance and to improve treatment recommendations.

Because enhanced surveillance increases the number of isolates submitted for testing, total burden for regional laboratories will increase. This burden will be partially offset by improved efficiencies in reporting.

1. Increase in the number of isolates submitted for testing

   The number of isolates submitted from sentinel sites to regional labs will increase from 7,200 per year (30 sites x 20 isolates per month x 12 months) to 13,200 per year (20 sites x 20 isolates per month x 12 months + 10 sites x 70 isolates per month x 12 months).

2. Decrease in the number of laboratories performing the testing

   The number of regional laboratories will decrease from 5 to 4. The average number of isolates processed by each lab will increase from the previously estimated 1,440 per year (approximately 7,200 / 5) to 3,300 (13,200 / 4).

3. Decrease in burden per response

   In the previous approval period, the average burden per response was estimated as 1 hour, which included analysis of the isolate and electronic submission of information to CDC. This estimate included manual data entry. In this Revision request, regional labs will utilize electronic laboratory systems to extract the information needed for their reports to CDC. This will reduce the regional labs' burden per response from 60 minutes to 40 minutes.

The total estimated annualized burden for antimicrobial susceptibility testing will increase from 7,260 hours to 8,800 hours (+1,540).

Summary of Changes in Antimicrobial Susceptibility Testing

	Type of Respondent	Type of data elements	Number of Respondents	Number of respondents per respondent	Average burden per response	Total burden hours
Previous approval	Regional laboratories	Antimicrobial susceptibility testing	5	1,452	1	7,260
Revision	Regional laboratories	Antimicrobial susceptibility testing	4	3,300	40/60	8,800

D. Decrease in burden for control strain susceptibility testing

   Each regional laboratory will continue to process 4 sets of control strains per month, or 48 sets per year (4 x 12), however, a number of changes result in a reduction in total annualized burden from 48 hours to 16 hours.

1. The number of regional laboratories will decrease from 5 to 4.

2. Burden per response will decrease from 12 minutes to 5 minutes.

   a. The number of control strains in each set will be reduced from 7 to 3.

b. Laboratories will no longer be required to report control strain results to CDC, except in circumstances when CDC or the regional laboratory makes a request based on unexpected testing results. This change is consistent with current guidance from entities that oversee laboratory testing practices in the United States

Summary of Changes in Control Strain Susceptibility Testing

	Type of Respondent	Type of data elements	Number of Respondents	Number of respondents per respondent	Average burden per response	Total burden hours
Previous approval	Regional labora-tories	Control strain suscepti-bility testing	5	48	12/60	48
Revision	Regional labora-tories	Control strain suscepti-bility testing	4	48	5/60	16

16. Plans for Tabulation and Publication and Project Time Schedule

Table A.16: Project Time Schedule

Activity	**Time Schedule**
Collection of isolates and clinical/demographic data from sentinel sites (STD clinics)	February 2018
Processing and testing of isolates at regional labs	Monthly after OMB approval
Download data from GISP Web or secure file transport from sentinel sites and laboratories to CDC	Quarterly after OMB approval
Data management and validation of data collected	Quarterly after OMB approval
Dissemination of results via annual report	12 months after OMB approval and annually

Preliminary data analysis is expected to begin 4 – 6 months after OMB approval and final analysis of the first year of data collection is expected to be completed 12 months after OMB approval. Additional data analysis will occur at least annually during the time period of the approved 3-year extension. Data analyses include descriptive analyses and trends in gonococcal antimicrobial resistance over time. Trends are presented as a percentage of isolates which are resistant to specific antimicrobial agents. Summary tables of demographic/clinical characteristics by antimicrobial resistance patterns are generated. Summary reports of GISP data are included in annual STD surveillance reports published by CDC (available at http://www.cdc.gov/std/). Site-specific GISP data are published on-line annually (Available at http://www.cdc.gov/std/gisp/). In addition, analyses of the data are published in scientific and public health journals and presented at scientific meetings. The information from these reports of the GISP data are often used by: CDC, state and local STD program managers for program planning and resource allocation; non-STD program policy makers; clinical and laboratory researchers; and others.

17. Reason(s) Display of OMB Expiration Date is Inappropriate

The display of the OMB expiration date is not inappropriate.

18. Exceptions to Certification for Paperwork Reduction Act (PRA) Submissions

There are no exceptions to the certification.

References

1. Satterwhite CL, Torrone E, Meites E, et al. Sexually transmitted infections among US women and men: prevalence and incidence estimates, 2008. Sex Transm Dis 2013;40(3):187-93.
2. Unemo M. Current and future antimicrobial treatment of gonorrhea – the rapidly evolving *Neisseria gonorrhoeae* continues to challenge. BMC Infect Dis 2015;15:364.
3. Kidd S, Moore PC, Kirkcaldy RD, et al. Comparison of Antimicrobial Susceptibility of Urogenital *Neisseria gonorrhoeae* Isolates Obtained From Women and Men. Sex Transm Dis. 2015 Aug;42(8):434-9. doi: 10.1097/OLQ.0000000000000312.
4. National Strategy for Combating Antibiotic-Resistance Bacteria. https://www.whitehouse.gov/sites/default/files/docs/carb_national_strategy.pdf. Accessed May 11, 2016.
5. CDC. Antibiotic Resistance Threats in the United States, 2013. Available at: http://www.cdc.gov/drugresistance/threat-report-2013/index.html.
6. CDC. Sexually Transmitted Diseases Treatment Guidelines, 2015. MMWR 2015;64(3):1–137.
7. Kirkcaldy RD, Soge OO, Papp JR, et al. Analysis of *Neisseria gonorrhoeae* azithromycin susceptibility in the United States by the Gonococcal Isolate Surveillance Project, 2005 to 2013. Antimicrob Agents Chemother 2015;59(2):998–1003.
8. Chesson HW, Kirkcaldy RD, Gift TL, et al. Ciprofloxacin resistance and gonorrhea incidence rates in 17 cities, United States, 1991–2006. Emerg Infect Dis 2014;20(4):612–619.
9. Kirkcaldy RD, Kidd S, Weinstock HS, et al. Trends in antimicrobial resistance in *Neisseria gonorrhoeae* in the USA: the Gonococcal Isolate Surveillance Project (GISP):January 2006–June 2012. Sex Trans Infect 2013;89(Suppl 4):iv5–10.
10. CDC. 2013 Sexually Transmitted Disease Surveillance, Available at: http://www.cdc.gov/std/stats13/default.htm
11. GISP Profiles, 2013, Available at http://www.cdc.gov/std/gisp2013/default.htm
12. CDC. CDC Grand Rounds: The Growing Threat of Multidrug-Resistant Gonorrhea. MMWR 2013;62(06):103-106.
13. CDC. Update to CDC's Sexually Transmitted Diseases Treatment Guidelines, 2010: Oral Cephalosporins No Longer a Recommended Treatment for Gonococcal Infections. MMWR 2012;61(31):590-594.
14. CDC. Cephalosporin Susceptibility Among *Neisseria gonorrhoeae* Isolates — United States, 2000-2010. MMWR 2011;60(26):873-877.
15. Kirkcaldy RD, Zaidi A, Hook EW III, et al. *Neisseria gonorrhoeae* Antimicrobial Resistance Among Men Who Have Sex

With Men and Men Who Have Sex Exclusively With Women: The Gonococcal Isolate Surveillance Project, 2005–2010. Annals Intern Med 2013;158(5):321-8.
16. Kirkcaldy RD, Bolan GA, Wasserheit JN. Cephalosporin-Resistant Gonorrhea in North America. JAMA 2013;309(2):185-187.
17. Soge OO, Harger D, Schafer S, et al. Emergence of increased azithromycin resistance during unsuccessful treatment of *Neisseria gonorrhoeae* infection with azithromycin (Portland, OR, 2011. Sex Transm Dis 2012;39(11):877-879.
18. Bolan GA, Sparling PF, and Wasserheit JN. The Emerging Threat of Untreatable Gonococcal Infection. New Engl J Med 2012;36(6):485-487.
19. CDC. Update to CDC's Sexually Transmitted Diseases Treatment Guidelines, 2006: Fluoroquinolones No Longer Recommended for Treatment of Gonococcal Infections. MMWR. April 13, 2007/56(14); 332-336.
20. Dowell D, Tian H, Stover JA, et al. Changes in fluoroquinolone use for gonorrhea following publication of revised treatment guidelines. Am J Public Health 2012;102(1):148-55.
21. Kirkcaldy RD et al. Trends in *Neisseria gonorrhoeae* susceptibility to cephalosporins in the United States, 2006-2014. JAMA 2015;314(17):1869-71.
22. Shlaes DM et al. The FDA reboot of antibiotic development. Antimicrob Agents Chemother 2013;57(10):4605-7.
23. Kirkcaldy RD et al. Neisseria gonorrhoeae antimicrobial susceptibility among men by HIV status, Gonococcal Isolate Surveillance Project (GISP), 2010-June 2014 (abstract 1338). National HIV Prevention Conference, December 8, 2015. Atlanta, GA.
24. Hook EW III et al. Determinants of emergence of antibiotic-resistant Neisseria gonorrhoeae. J Infect Dis 1989;159(5):900-7.
25. Zenilman JM et al. Penicillinase-producing *Neisseria gonorrhoeae* in Dade County, Florida: Evidence of core-group transmitters and the impact of illicit antibiotics. Sex Transm Dis 1988;15(1):45-50.
26. Wang SA et al. Multidrug-resistant *Neisseria gonorrhoeae* with decreased susceptibility to cefixime – Hawaii, 2001. Clin Infect Dis 2003;37:849-52.