Emergency Zika Package II:
Persistence of zika virus in body fluids and case-control investigation of etiologic agents associated with Guillain-Barré Syndrome

Request for OMB approval of a new ICR

Supporting Statement A

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- This emergency ICR consists of two separate projects:
  - PROJECT ONE: Persistence of Zika virus (ZIKV) RNA and IgM in body fluids of patients with acute Zika virus infection in Puerto Rico
  - PROJECT TWO: Case-Control Investigation of Etiologic Agents Associated with Guillain-Barré Syndrome (GBS)

PROJECT ONE

- The objectives are to assess the:
  - Prevalence and duration of ZIKV RNA in body fluids of both symptomatic and asymptomatic individuals with laboratory-confirmed ZIKV infection. Body fluids to be examined include blood, semen, vaginal secretions, urine, and saliva;
  - Duration of ZIKV IgM antibodies in serum;
  - Concordance between RT-PCR and virus isolation test results in body fluids; and
  - Association between ZIKV shedding and host factors such as demographic characteristics and the presence or absence of symptoms; and
  - Possibility of asymptomatic individuals potentially infecting mosquitoes.
- The intended use of the resulting data is to target and refine public health interventions and mosquito avoidance measures to arrest ongoing spread of ZIKV.
- This is a prospective, descriptive cohort study. The prospective nature of the proposed cohort study allows for determining the persistence of shedding ZIKV in bodily fluids through repetitive specimen data collection in individuals with confirmed ZIKV.
- Participants for the shedding study will be patients with laboratory-confirmed ZIKV infection.
- All statistical analysis will be conducted using SAS Version 9.3. Descriptive analysis of all variables will be performed to examine the frequency and distribution of the data.

PROJECT TWO

- The objectives are to:
  - Define the historic incidence of GBS at participating hospitals;
  - Describe demographic, epidemiologic, and clinical characteristics of patients with GBS identified at participating hospitals in 2016;
  - Collect clinical specimens from GBS patients to define potential infectious etiologic agents; and,
  - Conduct a case-control investigation to define demographic characteristics, environmental exposures, or infectious agents associated with the development of GBS.
- The intended use of the resulting data is to identify potential risk factors for the development of GBS.
- This is a case-control investigation.
- Subpopulation to be studied: GBS patients who resided in Puerto Rico continuously for the two months prior to onset of GBS. A minimum of two controls will be pair-matched to each case by age group.
- Data analysis will be conducted using Epi Info, Stata, and/or SAS. The database will be stored in an Excel spreadsheet, with access only to members of the investigation team.

1. Circumstances Making the Collection of Information Necessary

This is an emergency request for a new information collection for six months. This ICR includes two projects, both of which are part of the CDC's ongoing response in Puerto Rico to the Zika virus outbreak.

PROJECT ONE (Shedding study):
Zika virus (ZIKV) is a mosquito-borne flavivirus that has recently emerged in the Americas. Previously, outbreaks had occurred in Asia and islands in the south Pacific. In addition to mosquito-to-human transmission, ZIKV infections have been documented through sexual transmission, blood transfusion, laboratory exposure, intrauterine transmission resulting in congenital infection, and intrapartum transmission from a viremic mother to her newborn. Along with serum, ZIKV RNA has been detected in semen, urine, breast milk, and amniotic fluid. ZIKV IgM antibodies are generally first detectable at 4 to 8 days after onset of illness and likely persist for weeks to months though their duration in serum is unknown. The prevalence of ZIKV RNA in various body fluids among patients with acute ZIKV infection and the length of time that ZIKV RNA might persist in these body fluids is not well understood. Characterizing these parameters has implications both for potential human-to-human transmission and for diagnosis of ZIKV infection.

Our knowledge of the presence of ZIKV in semen is based on two previous case reports. One report, of suspected sexual transmission of ZIKV, the wife of a returning traveler was believed to become infected with ZIKV after having sexual intercourse with the traveler. The wife had no other known exposures to ZIKV, and had serologic and clinically compatible ZIKV illness. Because the wife had not traveled, and the couple reported sexual intercourse one day after the traveler returned, transmission of virus through semen has been suggested. The returning traveler experienced symptoms of dysuria, and prostatitis, though the presence of ZIKV RNA in the semen is not known.

In the second case, a patient in Tahiti sought care for hematospermia. The patient experienced two Zika like illnesses, the first 77 days prior to the onset of hematospermia, and the second 21 days prior to the onset of hematospermia. A sample collected 80 days post first illness onset, and 24 days post second illness onset, was found to contain replicative ZIKV particles. Based on these two published cases, we have reason to believe that ZIKV can be found in the semen of infected men, and presumably in additional body fluids of any infected individual. The prevalence of ZIKV RNA and IgM in body fluids among patients with ZIKV infection and the length of time that ZIKV RNA and ZIKV IgM persist in these body fluids is not well understood. Characterizing these parameters has implications both for potential human-to-human transmission and for diagnosis of ZIKV infection.

It is also not known if individuals with asymptomatic ZIKV infection contribute to mosquito-borne virus transmission. Learning about the presence and viral load of ZIKV RNA in the blood of asymptomatic persons would help us determine if mosquitos can potentially be infected from asymptomatic individuals and thereby contribute to virus transmission and spread. In Puerto Rico, vector control activities are focusing in the geographic areas where symptomatic cases are reported. Determining if asymptomatic individuals can potentially infect mosquitoes would greatly inform strategies for vector control. Moreover, if asymptomatic ZIKV infection does contribute to virus transmission, messaging to

household contacts of individuals with ZIKV infection regarding need for use of mosquito avoidance measures would be of public health importance. Measuring the prevalence of shedding among individuals with asymptomatic ZIKV infection in body fluids other than blood could also inform the use of different specimens for screening and diagnosis of Zika, particularly in pregnant women.

PROJECT TWO (GBS case-control investigation):
The emergence of ZIKV in the Americas may be associated with increased rates of GBS. During the current ZIKV outbreak in Brazil, the Brazilian Ministry of Health reported a marked increase in the number of GBS cases following suspected ZIKV infection. Similar reports have been made from French Polynesia, El Salvador, and Colombia.

In the Commonwealth of Puerto Rico, the first confirmed case of locally-acquired ZIKV infection was identified in early December 2015. As of March 3, 2016, 103 cases of ZIKV disease have been laboratory-confirmed, all except one of which were considered locally-acquired cases. In January 2016, one case-patient was hospitalized due to GBS. Two additional GBS cases have been reported to the Puerto Rico Department of Health (PRDH), both of which tested negative for recent ZIKV infection. Co-circulation of other arboviruses, high prevalence of HIV, and an ongoing influenza epidemic may complicate association of ZIKV infection with GBS.

There is an urgent public health need to understand the potential association between GBS and ZIKV infection. Currently, increased numbers of GBS cases have been reported in ZIKV-affected contexts, but it is not known if this is due to ZIKV, another etiologic agent, or some combination/interaction thereof. PRDH is establishing GBS surveillance and defining baseline incidence toward investigating the association between GBS and ZIKV infection in Puerto Rico. More broadly, the results of this investigation would be relevant to other ZIKV-affected contexts, serving toward enabling clinical and/or public health action to manage and prevent additional cases.

A case-control investigation will be conducted to identify potential risk factors for the development of GBS. As part of the investigation, blood specimens will be collected from GBS cases and matched controls to evaluate for antibodies against several pathogens known to cause GBS (e.g., influenza) or pathogens hypothesized to contribute to this illness cluster (e.g., ZIKV, dengue virus, chikungunya virus, HIV, Campylobacter jejuni, Leptospira species bacteria).

Authorizing Legislation comes from Section 301 of the Public Health Service Act (42 U.S.C. 241) (Attachment 1).

2. Purpose and Use of Information Collection

PROJECT ONE (Shedding study):
We propose to investigate the persistence of ZIKV in different body fluids (shedding) and its relation to immune response to provide a basis for development of non-blood-based diagnostic tools, and target and refine public health interventions to arrest ongoing spread of infection. To do so, we will conduct a prospective cohort study of symptomatic individuals with reverse transcription-polymerase chain reaction (RT-PCR) positive ZIKV infection and a cross-sectional study of their asymptomatic household contacts.

Results and analyses will be used to update relevant counseling messages and recommendations from the CDC.

The study will include baseline and follow-up questionnaires (Attachment J) and the collection of specimens (blood, saliva, urine from participants of all ages, and semen/vaginal secretions from adults only). Symptomatic patients with RT-PCR positive ZIKV infection will be recruited through the Sentinel Enhanced Dengue Surveillance System (SEDSS) that was established in 2012 at Saint Luke's Episcopal Hospital in Ponce, Puerto Rico through a cooperative agreement between the hospital and the CDC. Specimens will be tested for the presence of ZIKV RNA by RT-PCR at the CDC Dengue Branch Laboratory in San Juan, and positive specimens will be further tested for virus isolation to evaluate infectivity. Each body fluid will be collected on a weekly basis for 4 weeks and biweekly thereafter until two consecutive negative RT-PCR results are obtained from all specimens. Irrespective of RNA detection, body fluids will also be collected for RT-PCT at 2, 4, 6, and 9 months to investigate intermittent shedding. Analyses of antibody response through titers of IgM will be performed at baseline and repeated at 2, 4, 6, and 9 months. Seven milliliters of blood will be drawn at each study visit for a total not to exceed 70 ml during any given 8-week period. Symptomatic participants will be asked to refer up to 5 household members to establish the percentage of household members with detectable and potentially infectious Zika virus RNA in body fluids.

This study will help inform the presence and duration of ZIKV shedding in several body fluids among symptomatic ZIKV cases from Puerto Rico. It will also provide information regarding the duration of detection of anti-ZIKV IgM antibody among the same population. In addition, this study will determine the prevalence of anti-ZIKV IgM and IgG and virus shedding in body fluids among household contacts of ZIKV cases.

Because information collection will take longer than six months, a formal ICR will be submitted to OMB after the submission of this emergency ICR. First, for all of the Zika-related projects needing longer than the six month emergency clearance, a broad 60-day federal register notice will be published to inform the public of all the Zika response-related information collections being undertaken by CDC. A broad 30-day notice will also be published. After addressing public comments, CDC will submit a standalone ICR to OMB for this project and every other package needing longer than six months. Information collection is expected to conclude within one year (i.e. within six months after the expiration of this six-month emergency clearance). In addition to describing future information collection activities, this standalone ICR will describe the progress/achievements of the shedding study during its initial six month clearance period.

<u>PROJECT TWO (GBS case-control investigation):</u>
The objectives of the case-control study are to:

- Define the historic incidence of GBS at participating hospitals;
- Describe demographic, epidemiologic, and clinical characteristics of patients with GBS identified at participating hospitals in 2016;
- Collect clinical specimens from GBS patients to define potential infectious etiologic agents; and,
- Conduct a case-control investigation to define demographic characteristics, environmental exposures, or infectious agents associated with the development of GBS.

GBS patients at participating hospitals will be identified prospectively through surveillance that is being established by PRDH. Case reporting will require submission of a serum specimen and a case report form that collects descriptive demographic, epidemiologic, and clinical data. GBS patients will be contacted by project field epidemiologists, who will explain the purpose of the investigation. For those that give written consent to participate in the investigation (Attachment D), remaining clinical specimens (e.g., cerebrospinal fluid (CSF), urine, stool or rectal swabs) will be collected, and retrospective medical chart review will be performed to collect detailed information on clinical characteristics (Attachment F).

Data collection and analysis
Case and control interviews will be conducted using the questionnaire developed by the investigation team (Attachment C). All cases and controls will be asked questions about activities, antecedent signs and symptoms of illness, and exposures in the two months prior to onset of neurologic illness for cases and the same time period for their matched controls. A calendar will be used to orient cases and controls to the time period of interest.

Sera, urine, and saliva will be collected from cases and controls at the time of interview using standard techniques. The sera will be tested for antibodies against suspected infectious pathogens, such as ZIKV, dengue virus, chikungunya virus, influenza virus, human immunodeficiency virus, and Leptospira species bacteria. Urine specimens will be tested by rRT-PCR to identify ZIKV, dengue virus, or chikungunya virus. Serum will also be tested for anti-GM1 antibodies that have been previously associated with specific sub-types of GBS.

If any residual specimens are available from cases, those will also be obtained and undergo testing for infectious pathogens. It is not expected that matched controls will have any previously collected clinical specimens; however, in cases where controls had specimens collected while seeking medical care for an acute illness experienced within two months of GBS symptom onset of the matching case, these specimens will also be collected and tested for evidence of infection with the aforementioned pathogens. Residual samples will be stored after infectious testing is complete at the U.S. CDC with an identification number for possible additional testing for GBS-associated biological markers or other infectious pathogens as clinically indicated. If a participant does not provide consent to store the specimens, all specimens for that participant will be destroyed once testing for infectious disease pathogens has been completed. As with cases, written consent will also be obtained to review controls' medical records, where applicable and available, using a standardized chart abstraction form (Attachment F). Diagnostic test results will be securely transmitted from CDC to PRDH, which will then transmit diagnostic test results to participants by telephone or mail, as they prefer.

Data analysis will focus on potential demographic, environmental, and/or medical risk factors for developing GBS, as well as laboratory evidence for infection with the aforementioned pathogens.

It is not expected that this investigation will need more than six months, but if it does, then an ICR extension will be formally submitted to OMB for non-emergency review following the publication of broad 60- and 30-day FRNs.

3. Use of Improved Information Technology and Burden Reduction

PROJECT ONE (Shedding study):
Collected data will be directly recorded on computers or tablets to minimize data recording and entry errors and minimize delays in data availability. If paper forms must be used, interview responses will be entered into the database either daily or as a group at the close of data collection.

PROJECT TWO (GBS case-control investigation):
Household interviews will be done in-person and on paper. Data will be entered into an electronic database. Abstraction of medical records will be done via tablet and stored on an electronic database.

4. Efforts to Identify Duplication and Use of Similar Information

CDC is not aware of any other systematic collection of the information described herein.

5. Impact on Small Businesses or Other Small Entities

The collection of information does not primarily involve small entities. However, for the small entities involved, the burdens imposed by CDC's information collection requirements have been reduced to the minimum necessary for CDC to meet its regulatory and public health responsibilities.

6. Consequences of Collecting the Information Less Frequently

CDC activities pertaining to the zika virus response in Puerto Rico would be significantly hindered if it were not able to collect the information at the frequency necessary to prohibit the spread of this disease.

Collecting information less frequently than the CDC recommendations would interfere with the public health actions required to contain and respond to zika virus transmission and to do everything possible to limit, if not stop, deaths and associated illnesses due to this disease.

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

The activities outlined in this package fully comply with all guidelines of 5 CFR 1320.5.

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

A) Because this is a request for an emergency clearance, CDC asks that the 60-day comment period be waived.

B) There was no consultation outside of the Agency.

9. Explanation of Any Payment or Gift to Respondents

<u>PROJECT ONE (Shedding study):</u>
Participants will be provided a token of appreciation for their time. The token of appreciation will be provided to participants in consideration for their time off work to attend the study visit or complete procedures and transportation. In the past, SEDSS participants received an incentive of $20 to return for a convalescent study visit; however, only 30% returned for the follow-up visit. Informal conversations with participants suggested that increasing incentives could help with attrition. Thus, participants will receive $50 dollars for each study visit. For participants under 7 years of age, the parent will receive the full incentive. Participants will receive this token of appreciation for attending the study visit even if there is incomplete specimen collection. In this study, subjects are paid an amount that is commensurate

with time and effort. Whether a subject successfully provides all samples or just some, he/she is still being inconvenienced, had to miss time from work or school, and had to find transportation. It would be unjust to withhold payment for time and effort based on an inability or unwillingness to provide all samples, and it would constitute a penalty for the voluntary refusal of study procedures, which is prohibited by the regulation. Therefore, incentives will be provided to all participants who attend study visits irrespective of the number of specimens collected.

PROJECT TWO (GBS case-control investigation):
There is no payment or gift to respondents. Blood, urine, and saliva from consenting participants (i.e., case-patients and randomly selected controls) will be collected during home visit on a single occasion only. In our experience from past similar investigations, this has not required incentives. For GBS patients, CDC will use clinical specimens (e.g., CSF) collected during hospitalization.

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

This information collection request has been reviewed by the CDC National Center for Emerging and Zoonotic Diseases (NCEZID). NCEZID has determined that the Privacy Act does apply to this information collection request. The applicable System of Records Notice is 09-20-0136.

PROJECT ONE (Shedding study):
Only interviewers and staff trained in specimen collection will be used in the proposed study. A private environment will be used for study procedures to ensure confidentially of participant data. All participant information contained on study forms, in laboratory records and reports, and in electronic files will be kept confidential. Specimens and study forms will be linked through a unique study number only. Personally identifying information (e.g., names) will not be transmitted with specimens.

Only the Site Coordinator and authorized hospital staff will have access to the patient's information. The study forms will be faxed or sent courier in a sealed envelope marked as confidential to the CDC Dengue Branch for data entry after the forms are reviewed and completed. Physical documents containing study data will be stored in a locked file cabinet at the CDC Site Coordinator's Office. Questionnaires will be destroyed within one year after all data are entered and verified. Consent forms will be kept in locked cabinets for 3 years after data collection is complete. All electronic files will subsequently be stored in a password protected database on a secure network at the Dengue Branch. Only individuals with security codes will have access to electronically stored data. Additionally, only the CDC Site Coordinator, primary investigator, and co-investigators will have access to data with identifying information; collaborators will only be provided de-identified data with codes. The results from this study will be published or presented for scientific purposes in aggregate form only so that individuals cannot be identified.

Informed consent
If the patient agrees to participate, the nurse will give the patient the consent form to read and asked to provide written consent (Attachment H). Informed consent will be administered in Spanish. Once approved by the CDC IRB, the English version of the consent form will be translated into Spanish by certified translators at CDC, and reviewed by the IRB at St. Luke's. Substantive changes made to the Spanish version will be incorporated into the English version, which will be resubmitted to the CDC IRB for concurrence. If the patient agrees to participate and cannot read, the nurse or CDC staff will read the consent form as the participant looks at the form being read to them. Illiterate participants will

be asked to consent with their name or to write a letter "x," which is accepted as legally effective signature.

Parents/legal guardians will be asked to provide permission for children to participate. In Puerto Rico the legal age for consenting for medical treatments is 21 years old. However, emancipated minors are not considered children under the law and may give legal informed consent. Patients 14 to 20 years old who fulfill one or more of the following criteria are considered emancipated and will provide independent consent to participate in the study as adults and parental permission will not be sought: 1) legally emancipated, 2) support themselves financially, 3) live independent of their parents, 4) are pregnant, or 5) have children. (Article 13, Section 13 of Regulation 7617 of the Office of Patient Ombudsman, Act #194 of August 25, 2000). All non-emancipated minors between 14 and 20 years old, will complete an assent form (Attachments H and I) and if accompanied by a parent, the parent will complete the consent form. For all non-emancipated minors 16 to 20 years old who wish to participate and are **not** accompanied by their parents, we will request a waiver of documentation for parental permission in accordance with the provision of law (Article 13, Section 13 of Regulation 7617 of the Office of Patient Ombudsman, Act #194 of August 25, 2000) that allows for them to receive medical care without written consent under emergency situations. This will be recorded in the consent form and the parents will be called by phone to request their authorization for enrollment in the study. Written assent will be sought from non-emancipated minors age 14-20. Verbal assent will be sought for those from 7 to 13 years old. Recruiter will use a script to obtain verbal assent among this group (Attachments H and I). Written informed consent will be obtained from all adult subjects. If the patient is undecided and/or has questions about study participation, they will be encouraged to discuss any questions with study staff.

After the consent form is signed, a copy of the consent/assent form will be provided to the participant for their records. All consent and assent forms will be placed in a locked box in the triage area during the day and they will be brought by the study coordinator to a locked office and placed in a locked cabinet at the end of each day. All consent and assent forms will be destroyed 3 years after the study has been closed.

Waiver for documentation of parental permission.
The Puerto Rico law (Article 13, Section 13 of Regulation 7617 of the Office of Patient Ombudsman, Act #194 of August 25, 2000) states that a non-emancipated minor 14 to 20 years old may request medical treatment for emergency situations without parent present if the physician determines that the minor has the maturity and capacity to consent for him or herself. The physician providing medical care to this minor is responsible for the proper documentation in the medical record of how he/she determined the minor's capacity to consent for treatment. Given that this study presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context, we are requesting to have the parental permission documentation waived for non-emancipated minors age 16 (legal driving age) to 20 who are not accompanied by a parent. The nursing staff will document in the inform consent form (Attachment I) that the parent was contacted by phone and authorized the study procedures. The physician in care of the minor will attest that the patient was determined to be capable of providing informed consent by documenting this fact in the patient's medical record.

<u>PROJECT TWO (GBS case-control investigation):</u>
Paper copies of data collection instruments will be stored in a locked, secured filing cabinet at PRDH. Only investigators directly involved in the investigation will have access to case report forms. Photocopies of data collection instruments with only case identification numbers and no personal

identifying information will be securely transported to San Juan for data entry into a RedCap database. Information about sensitive topics, such as sexual behavior or drug use, will not be collected. Names will not be included in electronic databases. Any reports related to the findings of this investigation will not include personal identifying information.

Potential participants will be introduced to the investigation following a script that explains the reasons the investigation is being conducted, the activities involved in the evaluation, and the risks and benefits of participation (Attachment D). Written consent will be obtained from all participants for the following: 1) participation in the survey and collection of blood specimen on the day of the survey; 2) storage of specimens for future diagnostic testing; 3) retrieval of clinical specimens and review of medical records from any illness for which the individual sought medical care in the previous two months; and 4) willingness to be contacted in the future depending on test results or if additional studies are proposed. If a second specimen is needed one month after the initial investigation visit, a second consent form will be obtained (Attachment E). For participants meeting the definition of a minor in Puerto Rico (i.e., individuals <21 years of age, unmarried, without children, and living with their parents), written permission to participate will be obtained from a parent or guardian. Verbal assent will be obtained from participants 8–12 years of age.

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

IRB Approval

The protocols and tools used to conduct the case-control investigation was reviewed and approved by NCEZID's Human Subjects Advisor who determined that the data collection does not meet the definition of research under 45 CFR 46.102(d). IRB review is not required (Attachment N).

The shedding study was also reviewed by NCEZID's Human Subjects Advisor, who determined that the data collection does constitute research. The protocols and tools were approved (Attachment O).

Justification for Sensitive Questions

Sensitive questions are essential to meeting the goals of these information collections.

12. Estimates of Annualized Burden Hours and Costs

Estimated Annualized Burden Hours: The total number of estimated annualized burden hours for these two projects is 769. This includes the burden associated with our information collection instruments. We anticipate an additional 123 hours for the completion of consent forms.

Type of Respondent	Form Name	No. of Respondents	No. of Responses per Respondent	Average Burden per Response (in hours)	Total Burden Hours
Public health personnel	Shedding Questionnaire (Symptomatics)	350	8	10/60	467
	Shedding Questionnaire (Cross-Sectional Asymptomatics)	1,000	1	10/60	167

	GBS Chart abstraction questionnaire	10	6	1	60
General public	GBS Questionnaire for cases and controls	120	1	15/60	30
	Shedding Eligibility Form	1,350	1	2/60	45
Total					769

Estimated Annualized Burden Costs to Respondents

The average annual response burden cost is estimated to be $24,986.95. The hourly wage estimates are based on the Bureau of Labor Statistics May 2014 National Occupational Employment and Wage Estimates (http://www.bls.gov/oes/current/oes_nat.htm). Registered nurses are often the persons interviewed at hospitals, so their mean hourly wage ($33.55) is used to represent the public health personnel wages.

Type of Respondent	Form Name	Total Burden Hours	Hourly Wage Rate	Total Respondent Costs
Public health personnel	Shedding Questionnaire (Symptomatics)	467	$33.55	$15,667.85
	Shedding Questionnaire (Cross-Sectional Asymptomatics)	167	$33.55	$5,602.85
	GBS Chart abstraction questionnaire	60	$33.55	$2,013.00
General public	GBS Questionnaire for cases and controls	30	$22.71	$681.30
	Shedding Eligibility Form	45	$22.71	$1,021.95
Total				$24,986.95

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

There are no costs to respondents other than their time to participate.

14. Annualized Cost to the Government

The cost to the federal government is estimated at $135,552.00. The GBS case-control investigation requires four CDC employees—two EIS officers and two PHAP trainees—for three months at an average of 20 hours per week. The shedding study will require one doctoral level epidemiologist for six months (50% of the time), two MPH-level contractors full-time for six months, and two nurse contractors part-time for six months. For the CDC employees, hourly wage rates were used for step-1 FTEs for the Atlanta locality. These numbers are available at https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2015/ATL.pdf. The hourly wage for the nurse contractors comes from the mean national hourly wage for registered nurses.

Project	Position	Hours	Hourly Wage	Total
Shedding study	Epidemiologist	480	$42.31	$20,308.80
	MPH-level contractors (x2)	1,920	$29.69	$57,004.80
	Nurse contractors (x2)	960	$33.55	$32,208.00
GBS case-control investigation	EIS Officers (x2)	480	$29.69	$14,251.20
	PHAP Trainees (x2)	480	$24.54	$11,779.20
Total				$135,552.00

15. Explanation for Program Changes or Adjustments

This is a new information collection request, therefore program changes and adjustments do not apply at this time.

16. Plans for Tabulation and Publication and Project Time Schedule

PROJECT ONE (Shedding study):

Estimated dates for implementing and completing key activities.

Activities	Study Timeline in Months													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Local Ethics Committee Review	x													
Investigator Coordination Meeting	x													
Questionnaire Development	x													
Study Training		x												
Recruitment		x	x	x										
Data Collection		x	x	x	x	x	x	x	x	x	x	x		
Data Management		x	x	x	x	x	x	x	x	x	x	x		
Data Analysis		x	x	x	x	x	x	x	x	x	x	x		
Laboratory Analysis		x	x	x	x	x	x	x	x	x	x	x		
Results					x	x	x	x	x	x	x	x		
Interim Project Report				x	x									
Final Project Reports												x	x	x
Final Project Review Process												x	x	x

Dissemination of Project Outcomes												**x**	**x**	**x**

Because this project requires more than six months of data collection, a standard ICR will be submitted to OMB following approval of this emergency ICR.

PROJECT TWO (GBS case-control investigation):
Once OMB approval is obtained, GBS patients will be identified in real-time. GBS patients and their matched controls will be interviewed within 30 days of GBS patient illness onset. Following the completion of case and control interviews, diagnostic testing and data analysis will require an additional two to three months to complete.

This project is not expected to exceed six months. If more time is needed, though, a new ICR will be submitted to OMB.

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

The OMB Expiration Date will be displayed.

18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification.

Attachments

A. Public Health Service Act (42 USC 241)
B. Draft 60-day FRN
C. Case-control investigation questionnaire for the investigation of GBS in relation to arboviral infections
D. Case-control investigation consent/parental permission form
E. Case-control investigation consent/assent form follow-up
F. Case-control investigation chart abstraction questionnaire for the investigation of GBS in relation to arboviral infections
G. Shedding Eligibility Form
H. Shedding Consent Form
I. Shedding Consent Forms for screening of asymptomatic contacts
J. Shedding Baseline and follow-up questionnaires
K. Shedding Counseling messages for study participants
L. Shedding Protocol for zika virus specimen collection
M. Shedding Model Coupon
N. IRB Approval for Case-Control Investigation
O. IRB Approval for Shedding study