|  |  |
| --- | --- |
| GenIC No.: | 2014008-060 |
| EPI AID No. (if applicable): | 2014-060 |
| Requesting entity (e.g., jurisdiction): | Puerto Rico Department of Health |
| Title of Investigation: | Undetermined burden of disease and risk factors for chikungunya virus infections—Puerto Rico, 2014 |
| Purpose of Investigation: (Use as much space as necessary) | The EpiAid Team in collaboration with PRDH completed the following: 1) Conducted cluster investigations around the case-patients' homes. Information obtained included: a) detection of chikungunya cases that would not otherwise have been detected by passive surveillance; b) identification of the health care-seeking behaviors of patients; c) description of the clinical spectrum of disease across age groups; d) estimation of the level of DENV circulation in areas with known CHIKV transmission; e) entomologic surveillance to determine vector density and the frequency with which adult mosquitoes are infected with DENV and/or CHIKV; and f) identification of household and individual risk factors for infection with CHIKV.2) Established sentinel chikungunya surveillance sites. Because most chikungunya case-patients are likely to only need out-patient care, we established sentinel surveillance sites in outpatient clinics and emergency departments to detect acute febrile illnesses consistent with chikungunya. These sites along with data from the sentinel enhanced dengue surveillance system (SEDSS) enable tracking of the outbreak and estimation of disease incidence. 3) Provided messaging, alerts and educational material for clinicians and the public.4) Provided recommendations on vector surveillance and control mechanisms to monitor and mitigate the mosquito vectors that transmit CHIKV.5) Conducted a rapid assessment of hospital needs to ensure availability of necessary medications (IV fluids, pain medication, antipyretics, etc.). |
| Duration of Data Collection: |  |
| Date Began: | 6/22/2014 |
| Date Ended: | 9/5/2014 |
| Lead Investigator |  |
| Name: | Tyler M. Sharp, Ph.D. |
| CIO/Division/Branch: | NCEZID/DVBD/DB |

**Complete the following for each instrument used during the investigation.**

**Data Collection Instrument 1**

|  |  |
| --- | --- |
| *Name of Data Collection Instrument:* | Chikungunya\_Household Interview Form |

*Type of Respondent*

|  |
| --- |
| [x]  General public [ ]  Healthcare staff [ ]  Laboratory staff [x]  Patients [ ]  Restaurant staff |
| [ ]  Other (describe): |  |

*Data Collection Methods (check all that apply)*

|  |  |
| --- | --- |
| [x]  Epidemiologic Study (indicate which type(s) below) |  |
| [x]  Descriptive Study (describe): | Performed household investigations to identify demographic, geographic, or behavioral risk factors for infection, health care-seeking behaviors of infected individuals, and clinical awareness and diagnosis of patients with chikungunya to help direct public and clinical mitigation efforts including reducing mosquito exposures and vector control. |
| [ ]  Cross-sectional Study (describe): |  |
| [ ]  Cohort Study (describe): |  |
| [ ]  Case-Control Study (describe): |  |
| [ ]  Other (describe): |  |
| [x]  Environmental Assessment (describe): | Households offered mosquito traps to be placed on the presmise of their household to determine the relative abundance of mosquitoes and the % of infected mosquitoes. No data were collected from households where traps were placed beyond what was collected on the household investigation form. |
| [ ]  Laboratory Testing (describe): |  |
| [ ]  Other (describe): |  |

*Data Collection Mode (check all that apply)*

|  |  |
| --- | --- |
| [x]  Survey Mode (indicate which mode(s) below): |  |
| [x]  Face-to-face Interview (describe): | Interviews completed in households by in-person interview with the head-of-household. |
| [ ]  Telephone Interview (describe): |  |
| [ ]  Self-administered Paper-and-Pencil Questionnaire (describe): |  |
| [ ]  Self-administered Internet Questionnaire (describe): |  |
| [ ]  Other (describe): |  |
| [ ]  Medical Record Abstraction (describe): |  |
| [ ]  Biological Specimen Sample |  |
| [ ]  Environmental Sample |  |
| [ ]  Other (describe): |  |

*Response Rate (if applicable)*

|  |  |
| --- | --- |
| Total No. Responded (A): | 137 |
| Total No. Sampled/Eligible to Respond (B): | 200 |
| Response Rate (A/B): | 69% |

**Data Collection Instrument 2**

|  |  |
| --- | --- |
| *Name of Data Collection Instrument:* | Chikungunya\_Individual Interview Form |

*Type of Respondent*

|  |
| --- |
| [ ]  General public [ ]  Healthcare staff [ ]  Laboratory staff [x]  Patients [ ]  Restaurant staff |
| [ ]  Other (describe): |  |

*Data Collection Methods (check all that apply)*

|  |  |
| --- | --- |
| [x]  Epidemiologic Study (indicate which type(s) below) |  |
| [x]  Descriptive Study (describe): | Performed household investigations to identify demographic, geographic, or behavioral risk factors for infection, health care-seeking behaviors of infected individuals, and clinical awareness and diagnosis of patients with chikungunya to help direct public and clinical mitigation efforts including reducing mosquito exposures and vector control. |
| [ ]  Cross-sectional Study (describe): |  |
| [ ]  Cohort Study (describe): |  |
| [ ]  Case-Control Study (describe): |  |
| [ ]  Other (describe): |  |
| [ ]  Environmental Assessment (describe): |  |
| [x]  Laboratory Testing (describe): | All serum specimens collected from individuals participating in the household investigations were tested by RT-PCR and IgM ELISA to detect evidence of current and recent infection with chikungunya virus and dengue virus. |
| [ ]  Other (describe): |  |

*Data Collection Mode (check all that apply)*

|  |  |
| --- | --- |
| [x]  Survey Mode (indicate which mode(s) below): |  |
| [x]  Face-to-face Interview (describe): | Interviews completed in households by in-person interview with the individual. |
| [ ]  Telephone Interview (describe): |  |
| [ ]  Self-administered Paper-and-Pencil Questionnaire (describe): |  |
| [ ]  Self-administered Internet Questionnaire (describe): |  |
| [ ]  Other (describe): |  |
| [ ]  Medical Record Abstraction (describe): |  |
| [ ]  Biological Specimen Sample |  |
| [ ]  Environmental Sample |  |
| [ ]  Other (describe): |  |

*Response Rate (if applicable)*

|  |  |
| --- | --- |
| Total No. Responded (A): | 251 |
| Total No. Sampled/Eligible to Respond (B): | 416 |
| Response Rate (A/B): | 60% |

**Data Collection Instrument 3**

|  |  |
| --- | --- |
| *Name of Data Collection Instrument:* | Chikunguna\_Case Report Form (Spanish) |

*Type of Respondent*

|  |
| --- |
| [ ]  General public [x]  Healthcare staff [ ]  Laboratory staff [x]  Patients [ ]  Restaurant staff |
| [ ]  Other (describe): |  |

*Data Collection Methods (check all that apply)*

|  |  |
| --- | --- |
| [x]  Epidemiologic Study (indicate which type(s) below) |  |
| [x]  Descriptive Study (describe): | Established sentinel surveillance for chikungunya. |
| [ ]  Cross-sectional Study (describe): |  |
| [ ]  Cohort Study (describe): |  |
| [ ]  Case-Control Study (describe): |  |
| [ ]  Other (describe): |  |
| [ ]  Environmental Assessment (describe): |  |
| [x]  Laboratory Testing (describe): | Patients with chikungunya-like illness presenting to sentinel surveillance sites had serum specimens collected for clinical diagnostic testing (RT-PCR and IgM ELISA) to confirm evidence of chikungunya or dengue virus infection. All diagnostic testing performed at CDC Dengue Branch, where test results are maintained in a secure database. |
| [ ]  Other (describe): |  |

*Data Collection Mode (check all that apply)*

|  |  |
| --- | --- |
| [ ]  Survey Mode (indicate which mode(s) below): |  |
| [x]  Face-to-face Interview (describe): | The chikungunya case investigation form was completed by in-person interview of the patient by their healthcare provider. |
| [ ]  Telephone Interview (describe): |  |
| [ ]  Self-administered Paper-and-Pencil Questionnaire (describe): |  |
| [ ]  Self-administered Internet Questionnaire (describe): |  |
| [ ]  Other (describe): |  |
| [ ]  Medical Record Abstraction (describe): |  |
| [ ]  Biological Specimen Sample |  |
| [ ]  Environmental Sample |  |
| [ ]  Other (describe): |  |

*Response Rate (if applicable)*

|  |  |
| --- | --- |
| Total No. Responded (A): | 531 |
| Total No. Sampled/Eligible to Respond (B): | 531 |
| Response Rate (A/B): | 100% |

**(Additional Data Collection Instrument sections may be added if necessary.)**

**Complete the following burden table. Each data collection instrument should be included as a separate row.**

*Burden Table (insert rows for additional respondent types if needed)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Collection Instrument Name | Type of Respondent | No. Respondents (A) | No. Responses per Respondent (B) | Burden per Response in Minutes (C) | Total Burdenin Hours(A x B x C)/60\* |
| Chikungunya\_Household Interview Form |  | 137 | 1 | 15 | 35 |
| Chikungunya\_Individual Interview Form |  | 251 | 1 | 15 | 63 |
| Chikunguna\_Case Report Form (Spanish) |  | 531 | 1 | 15 | 133 |

Return completed form and a blank copy of each final data collection instrument within 5 business days of data collection completion to the EEI Information Collection Request Liaison, Danice Eaton (dhe0@cdc.gov).

**EEI Information Collection Request Liaison**:

Danice Eaton, PhD, MPH

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