

**Data Collection for Evaluation of Education, Communication, and Training (ECT)
Activities for the Division of Global Migration and Quarantine**

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**Knowledge, Attitudes, and Practices about Dengue and Chikungunya among Travel
Consultants and Aid Agencies**

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**Statement B
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Statement B –Statistical Methods

No statistical methods will be employed in this qualitative study.

1. Respondent Universe and Sampling Methods

A considerable number of US travelers from mission and humanitarian aid organizations are visiting foreign destinations where dengue and chikungunya fever are now common. Unlike traditional tourists, missionary and humanitarian aid travelers may stay in rustic conditions in rural areas and may be less aware of the risks such travel entails to their health. The purpose of this data collection is to learn about missionaries and volunteers' knowledge, attitudes, and practices about travel health, including personal protection measures to avoid illness while traveling abroad, and specifically dengue and chikungunya. Mission and humanitarian aid organization (sending agency) staff will also be asked about health and safety recommendations they make to program participants regarding international travel and about the usefulness of travel health information on CDC's websites. The information gathered in this evaluation will help develop tailor-made educational materials to prevent dengue and chikungunya infection among missionary and humanitarian aid organizations traveling to affected areas. It will also help improve CDC's websites with health information for all travelers.

A range of 3 to 9 focus group discussions will be conducted online with a range of 18 to 90 individual participants for this data collection. A maximum of 180 potential participants will be screened to reach the goal of 18 to 90 participants, using an estimated response rate of 50%. Potential responders to this evaluation will be adult employees and participants of international missionary/humanitarian aid organizations. Potential participants will be recruited based on self-identified experience participating in or organizing international trips. Direct recruitment will take place via two approaches: 1) we will identify and make a list of 3 potential missionary and humanitarian organizations using online information of a universe of 89 organizations, and 2) we will use snowball suggestions (key informants identify others who know about the topic or who the researcher should contact). We will contact target agencies via phone explaining the goal of the focus groups and request to speak with the most appropriate person. If this approach is unsuccessful, we will send email requests to introduce the study and place follow-up phone calls. If individuals agree to participate, we will send them the date, time and internet link for joining focus groups sessions as well as an electronic copy of the consent form. We will conduct one to three focus groups with each sending agency.

Table B.1: Potential Respondent Universe

Entity	Potential Respondent	N*
Missionary/Humanitarian Non-religious Sending Agency 1	Sending agency staff and missionaries and humanitarian aid workers	30
Missionary/Humanitarian Religious Sending agency 2	Sending agency staff and missionaries and humanitarian aid workers	30
Missionary/Humanitarian Medical Sending Agency 3	Sending agency staff and missionaries and humanitarian aid workers	30
Total Universe of Potential Respondents		90

* N is based on the maximum number of participants recruited from the 3 types of sending agencies.

2. Procedures for the Collection of Information

CDC staff developed a list of 89 missionary and humanitarian organizations from the US and Puerto Rico using information publicly available online. Missionary and humanitarian aid organizations were categorized by type of sending agency (i.e., non-religious, religious, and medical based). Missionary/humanitarian aid sending agencies listed under the selected categories will be contacted until one target agency for each category agrees to participate in the focus groups. We will contact the three sending agencies via telephone to explain the purpose of the focus groups and will request to speak with the most appropriate person. If this approach is not successful, we will send email requests to introduce the data collection ahead of time and place follow-up phone calls. If they agree to participate, we will send the date, time and internet link for joining focus groups sessions. If we do not reach the number of six to ten participants for each focus group, we will ask key informants from the selected organizations to identify other missionaries/aid workers who know about the topic and would participate in the online focus groups (snowball technique). We will conduct a minimum of 1 and a maximum of 3 focus group session with each type of sending agency. For each group session we will recruit between 6 participants (minimum) and 10 participants (maximum). In total, we will conduct a range of 3 to 9 focus groups sessions and will recruit a range of 18 – 90 individual participants.

Before participation, focus group participants will be explicitly asked their age to ensure they are legal adults (minimum age 18 years for the US and age 21 years for Puerto Rico). Focus group participants will receive an electronic copy of the consent form prior to the beginning of the online focus group discussion. At the beginning of the online focus group, the moderator will read the consent form along with the participants and will ask participants to verbally consent. In the consent process participants will be informed about the purpose of the data collection; that participation is strictly voluntary; that they may decline to answer any or all questions; and, that they may withdraw from participation at any time. Verbal consent will be obtained from all

participants as focus groups will be conducted via internet using Adobe Connect or other software. No personally identifiable information will be recorded as part of data collection.

Focus groups are the most appropriate method to collect in-depth information to understand individuals' knowledge and attitudes, as well as their practices and preferences. By using a discussion guide, a moderator can probe participants and generate discussion about their knowledge, attitudes and practices with regards to a specific topic. We have developed two discussion guides; one for sending agencies and one for missionaries and aid workers to learn about travel health practices of volunteers during missionary/ humanitarian aid trips.

A CDC moderator (from Travelers' Health or Dengue Branch) will brief participants on the focus group discussion process before each group session begins (e.g. the importance of speaking one at a time; there is no wrong or right answers, all opinions are welcome; the presence of note takers to record answers and that audio will be taped; the voluntary nature of participation; that no individually identifiable information will be collected during the group discussion). The moderator will use the Moderator's Guide of Questions for Focus Groups with Sending Agencies to conduct discussion with staff of sending agencies that coordinate missionary/humanitarian aid trips. The objective is to learn about the recommendations sending agencies' staff makes to their volunteers regarding health and safety when traveling overseas and to assess the potential usefulness and content of the CDC's travel health information. The question guide for sending agencies consist of 16 questions related to the travel health information practices of sending agencies when organizing a mission trip, how often they refer volunteers to travel health clinic and how often they give advice to volunteers about mosquito bites. This question guide also gathers data on sending agencies attitudes towards the CDC's website, interest in learning more on and disseminating information about travel health recommendations and receiving reports of volunteers about illness and, their preferences about best channels to disseminate information to volunteers. In addition, the question guide asks about the knowledge sending agencies have about dengue, chikungunya and the mosquito vector.

The same methodology will be used for missionary/humanitarian aid travelers, although with a discussion guide tailored to this specific audience: the 16 question Moderator's Guide for Focus Groups with Volunteers to probe participants' on their knowledge, attitudes, and practices about personal protection measures to avoid illness while traveling abroad, especially about dengue and chikungunya. The guide includes questions about participants' travel practices and preparation habits, their experience locating travel health information, the training they received from their sending agencies delivery of travel health information practices. It also contains questions regarding the attitudes of program participants towards health and safety during travel, attitudes towards and experience with the CDC's website, attitudes and practices regarding mosquito bite prevention, and their interest in learning more about travel health recommendations and reporting illness during travel. Additionally, the guide includes questions

about knowledge regarding diseases transmitted by mosquito bites, specifically dengue and chikungunya and how to prevent mosquito bites. If necessary, note takers can send additional questions to the moderator and the moderator will probe participants to clarify participants' responses to questions. No individually identifiable information will be collected using the two guides of questions. The whole intervention is a one-time data collection.

The question guides will be administered online in approximately 3 to 9 focus group discussions to a total of 18 to 90 participants (maximum). Data from these focus group discussions will be used to improve outreach to missionary/humanitarian organizations regarding health risks, develop appropriate mosquito-borne disease prevention messages, develop a more user-friendly and interactive dengue and chikungunya website, and determine the best way to report dengue and chikungunya fever among travelers.

A CDC note taker from Travelers' Health or Dengue Branch will assist with recording participants' responses to questions. The moderator and the note taker will meet after each group session to go over the discussion, check notes to clarify doubts regarding participants' responses and add probes to expand discussion on specific concepts in the next focus group session. In addition to these notes, focus group discussion audio will also be digitally recorded for verbatim transcription.

A thematic and content analysis of the transcript and notes from focus groups discussions will be performed. For the data analysis, CDC behavioral scientists will compile and code the data under categories developed a priori based on evaluation objectives. Inter-coder reliability will be established between the two coders, aiming for $\alpha > 90\%$, to ensure consistency of coding. Categories will later be arranged by themes for reporting. Results may be presented at a national or international conference and reported in a manuscript and submitted for publication in a peer-reviewed journal.

3. Methods to Maximize Response Rates and Deal with No Response

The following methodology and best practices will be employed to maximize response rates to 80%: (1) Informing respondents of what the study is asking, why questions are being asked, who will see the results, how the results will be used, how respondents may benefit from the results and how the findings will be put into action; (2) Addressing confidentiality and ensuring anonymity of participants: respondents who know their answers will not be linked to them in any way may be more likely to respond and more likely to provide truthful responses; (3) Using bilingual and bicultural interviewers and culturally and linguistically appropriate data collection instruments as some focus group sessions will be also conducted with Puerto Rican residents; and, (4) Minimizing study length while maximizing the richness of data that can be obtained. Respondents will be told how much time the study will take to complete so they know what to expect.

4. Test of Procedures or Methods to be Undertaken - Focus Groups Question Guides

Before the proposed information collection is implemented, the Moderator’s Guide of Questions for Focus Groups with Sending Agencies and the Moderator’s Guide for Focus Groups with Volunteers were pilot tested with 4 and 5 participants correspondingly. The following lessons from the pilot test were identified:

- Some questions needed additional explanations.
- Probes were added to obtain more information from respondents.
- Some questions led to the repetition of responses from participants.

The following changes were incorporated into the Moderator’s Guide of Questions for Focus Groups with Sending Agencies:

- Question #1- changed wording to: How many international trips you have worked with in the past year.
- Question #2- question’s order was changed to: What regions do you primarily organize trips for (e.g. Africa, Latin America, and the Caribbean, Southeast Asia and the Pacific Islands, North America).
- Question #3- was divided in two and probes were added: Which type of trips do you help organize, long-term or short-term trips? Do you organize trips for large or small groups? How does coordination of these types of trips differ? How is it the same? In what type of accommodations have missionaries stayed in during the trips?
- Question #8- a probe was added: How comfortable do you feel providing health and safety information to your volunteers? How informed (confident) do you feel when providing health and safety information to your volunteers?

The following changes were incorporated into the Moderator’s Guide for Focus Groups with Volunteers:

- Question #1- changed the number of years to: How many trips have you participated in the last three years?
- Question #2- changed the number of years and added a probe: What regions have you visited in the last three years (e.g. Africa, Latin America and the Caribbean, Southeast Asia and the Pacific Islands, North America)? How long have you stayed?
- Question #3- changed question to: What type of accommodations have you stayed in during the trips?
- Question #5- added “about your mission”: How often do you look for travel health and safety information about your mission destination? When do you look for this information?

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

No statistical methods will be employed in this qualitative study.

The protocol, screeners and the Moderator’s Guide of Questions for Focus Groups with Sending Agencies and the Moderator’s Guide for Focus Groups with Volunteers were developed in collaboration with and were reviewed by staff of the Division of Global Migration and Quarantine and the staff of the Division of Vector Borne Diseases, Communications Unit of the Dengue Branch.

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