Availability, Use, and Public Health Impact of Emergency Supply Kits among Disaster-Affected Populations

OMB Control No. 0920-NEW

New

Supporting Statement Part A

Amy Helene Schnall
Title: Epidemiologist
Phone: 770.488.3422
Email: GHU5@cdc.gov
Fax: 770.488.3450
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Goals of the study: The goal of this study is to determine the efficacy and public health impact of emergency supply kits among disaster-affected populations. Specifically, this study will attempt to understand how emergency supply kits are used during and after a natural disaster, if public health outcomes (e.g., self-sufficiency, decreased disease exacerbation) are associated with access to emergency supply kits, and what the most useful items to include in an emergency supply kit are across different types of disasters.

Intended use of the resulting data: The data will 1) inform the Centers for Disease Control and Prevention (CDC) and state, tribal, local, and territorial (STLT) health agencies about public knowledge, preparedness, and use of emergency supply kits; 2) contribute to federal and STLT recommendations and public health interventions regarding the availability and composition of emergency supply kits; and 3) assess the general public health impact of recent disasters.

Methods to be used to collect data: We will conduct a cross-sectional study among two disaster-affected populations. We will select geographic sites (e.g., city, town, region) for inclusion in the study after a disaster (e.g., hurricane, wildfire, flood, tornado) has occurred in the area. Households will be selected via address-based sampling in the defined areas for participation. We will send households a paper-based (mailed) survey as well as a link to complete an online web survey; the households can choose either format – paper or online – but not both. As paper-based surveys are mailed to participants and back from participants, there is no concern regarding COVID-19. In addition, if available, we will invite members of an existing nonprobability web panel living in the disaster area directed to the online, web-based instrument to create a larger, more cost- effective dataset. Panel availability is not guaranteed because some geographic locations (e.g., rural areas) may not have enough web panel participants from which to draw. We will capture the web-based data via Voxco and use Teleform for paper-based data collection. In addition, up to two focus groups per site will be conducted concurrently, or shortly after, the cross-sectional study data collection to enhance and contextualize survey data. Focus groups are online.

The subpopulation to be studied: The subpopulation includes residents of a house that is within the community or geographic area that recently experienced a natural disaster. The respondent can be any member of the household who is over the age of 18 and living in the selected areas at the time of the disaster. Participants will provide survey data that describe disaster-related experiences among all household members.

How data will be analyzed: We will use univariate and multivariable regression methods to summarize the survey data. Analyses will determine the knowledge, attitudes, beliefs, and behaviors of households with regards to the preparation and use of emergency supply kits during and shortly after a disaster. We will describe the associations between emergency supply kit use and self-sufficiency. In addition, we will use regression modeling to describe the extent to which emergency supply kit use has an impact on the health status and needs of household members during and shortly after a natural

A.1. Circumstances Making the Collection of Information Necessary

This is a new two-year information collection request (ICR) from the National Center for Environmental Health (NCEH), Centers for Disease Control and Prevention (CDC). This data collection is authorized by Section 301 of the Public Health Service Act (42 U.S.C. 241) (Appendix A). Appendix B provides the 60-day Federal Register Notice.

Background. An all-of-society approach to disaster risk reduction emphasizes inclusion and engagement in preparedness activities. A common recommendation is to promote household preparedness through the preparation of an emergency supply kit that can be used to shelter-in-place or during evacuation. Lack of household preparedness is a public health concern, especially in medically frail populations, because it consumes first responders' time, taking them away from relief and recovery efforts, and can easily deplete community health resources.[1] The Federal Emergency Management Agency (FEMA) states that individuals or households are prepared for a disaster if they have thought about and planned for the types of disaster for which they are at most risk, have developed a family communication and evacuation plan in the event of a disaster, and have assembled a complete disaster (emergency) supply kit.[2] However, the prevalence of emergency supply kits across households in the United States ranges considerably from a community-level low of 10% to a regional high of 68%.[3,4] This lack and variation of emergency supply kits across households makes household disaster preparedness a public health concern.

Self-sufficiency (defined as the ability to shelter-in-place without needing to leave your home or call for outside assistance for ~3 days following a disaster) can help reduce the demands placed on first responders during critical times, which has downstream public health impacts. Among persons with an existing physical or mental health condition at the time of the disaster, having an adequate supply of prescription and over-the-counter medications and medical supplies allows people to maintain treatment and prevent worsening or exacerbation of their existing condition or illness. It also can reduce their need for emergency medical services following a disaster. The FEMA definition of an emergency supply kit is one that can sustain each member of a household with food, water, and medication for up to three days.[2] However, there are several knowledge gaps and challenges related to emergency supply kit use and effectiveness, including whether the current recommendations are adequate or need expansion. We identified the following gaps:

- Lack of consistency for what supplies to include in an emergency supply kit: while the public can access information on what contents are likely important to include in

emergency supply kits, there is a lack of information as to whether there is a standard set of supplies that is consistently needed across disaster types

- Lack of a standard tool for evaluation of emergency supply kit use and effectiveness
- Lack of information on how emergency supply kit items are used during or following disasters: currently we lack detailed information on how households use emergency supply kit items during or following disasters and what, if any, are barriers to their use
- Lack of information on effectiveness of emergency supply kits in preventing adverse outcomes: to our knowledge, there is no information on whether the use of emergency supply items prevents adverse health outcomes. Among individuals with health conditions, it remains unclear whether preparing an emergency supply kit with adequate medications and medical supplies prevents the worsening of conditions or the need for emergency medical services
- Lack of data to support emergency supply kit recommendations: it is unclear whether having essential supplies improves self-sufficiency and lessens the need for outside assistance

This general lack of research on the efficacy and use of emergency supply kits impedes our ability to make data-driven recommendations regarding emergency supply kit promotion.[5]

A.2. Purpose and Use of the Information Collection

Data collected is designed to be used by public health department personnel, emergency management officials, federal agencies, and others to establish and promote a gold standard for recommendations on composition of emergency supply kits. The project will take the initial steps to close the existing knowledge gaps in disaster research surrounding how emergency supply kits affect population self-sufficiency and resiliency to disasters. The cross-sectional disaster survey and focus group(s) on the public's knowledge, preparedness, and use of emergency supply kits will identify and inform public health officials about the most useful items to include in an emergency supply kit, ideally across two different types of disasters. This information collection will include two sites affected by recent natural disasters (e.g., hurricane, tornado, flood, wildfire). We anticipate that one site will be a city or county impacted by a hurricane in the Southeastern United States while the other may be a city or county impacted by wildfire in California or a Midwest city/county impacted by a flood or tornadoes. Data collection is anticipated to be between December 2020 and May 2022, depending upon disaster occurrence. Parameters for site selection include a major or state-level disaster

declaration for a natural disaster that affects a mid- to high-density area (e.g., population of 100,000 people) within the United States.

Survey participants will be selected via address-based sampling in the defined geographic area impacted by the disaster and given the choice to complete the survey via paper (i.e., Teleform) or online via a web-based instrument. Households will be selected via address-based sampling in the defined areas for participation. We will send households a paper-based (mailed) survey as well as a link to complete an online web survey; the households can choose either format – paper or online – but not both. As paper-based surveys are mailed to participants and back from participants, there is no concern regarding COVID-19. In addition, if available, we will invite members of an existing nonprobability web panel living in the disaster area directed to the online, web-based instrument to create a larger, more cost- effective dataset. Panel availability is not guaranteed because some geographic locations (e.g., rural areas) may not have enough web panel participants from which to draw. We will capture the web-based data via Voxco and use Teleform for paper-based data collection. In addition, up to two focus groups per site will be conducted concurrently, or shortly after, the cross-sectional study data collection to enhance and contextualize survey data. Focus groups are online. However, to ensure that participants include individuals from vulnerable populations who may not have access to computer/internet/webcam equipment at home (e.g., low SES; older adults with chronic diseases), potential accommodations may be available such as reserving a meeting location with appropriate equipment at the local Department of Health or library. We do not anticipate COVID-19 being an issue in these circumstances as participants can be in rooms alone or socially distanced and because of our current timeline of activities.

We anticipate the following use of the information collected:

- Enhance the body of knowledge on why and how households prepare for emergencies and/or disasters
- Understand what supplies are included in preparation
- Describe how identified supplies are used during or immediately following disaster impact
- Detail the effectiveness of use in preventing adverse outcomes
- Provide several practical public health activities (discussed below)

The primary audience for the results from this study are federal and STLT public health officials, emergency managers, and other agencies and organizations involved in disaster preparedness and response (e.g., FEMA, Red Cross, fire/police departments). Specifically, data will inform

guidance from health departments and these other organizations on emergency supply kit use, items to include, and public perception. Information gathered on what may prevent households from creating emergency supply kits, the lack of supplies that were needed during and shortly after a disaster's impact, and the effects these deficiencies have on adverse outcomes will collectively inform whether there is a need for public health education and intervention activities.

The results will also be valuable in helping those living in areas prone to disasters protect themselves by creating self-sufficiency. Shortly after a disaster's impact, government resources are often limited and focused on response and recovery operations. If we find that households lacking emergency supply kits leads to exacerbation of health issues and creates a need to rely on these resources, then the public health and disaster preparedness community will be able to add that information to existing and newly developed messaging.

CDC's National Center for Environmental Health (NCEH) will use univariate and multivariable regression methods to summarize the survey data. Analyses will determine the knowledge, attitudes, beliefs, and behaviors of households with regards to the preparation and use of emergency supply kits during and shortly after a disaster. We will describe the associations between emergency supply kit use and self-sufficiency. In addition, we will use regression modeling to describe the extent to which emergency supply kit use has an impact on the health status and needs of household members during and shortly after a natural disaster.

We will also employ bivariate and multivariable regression models determine if there are associations for the following:

1. Knowledge, attitudes, beliefs, behaviors related to emergency supply kit preparation/use and household demographics
2. Knowledge, attitudes, beliefs, behaviors related to emergency supply kit preparation/use and the degree of disaster exposure (e.g., damage, injury)
3. Emergency supply kit contents/use (or lack thereof) and self-sufficiency during and shortly after a disaster
4. Emergency supply kit contents/use (or lack thereof) and exacerbation of health issues during and shortly after a disaster.

Results from the focus group will contextualize findings from the survey and provide guidance on how the public may respond to future recommendations and areas for future research.

If NCEH does not collect the information described for this study, health departments and other organizations involved in disaster preparedness will be unable to refine guidance for the public on how to best prepare their households for disasters.

A.3. Use of Improved Information Technology and Burden Reduction

To reduce the burden on study participants, CDC will give participants the choice to use electronic data entry for the survey. We will collect survey responses, depending on the preference of study participants, using a Teleform scannable paper questionnaire or directly into the survey platform. To enhance ease of data recording, the online survey will include automatic skip patterns. The paper questionnaire uses clear instructions, maximization of white space, and well-defined skip patters to enhance ease of those who chose to complete the scannable version.

A.4. Efforts to Identify Duplication and Use of Similar Information

CDC consulted with partners at FEMA and STLT health departments to help determine need for this study. To our knowledge, the information collections proposed are not being conducted elsewhere and CDC is not aware of any other studies using this protocol. CDC conducted literature and World Wide Web searches and did not identify studies collecting the information proposed here.

Environmental public health and disaster preparedness stakeholders, including public health officials, emergency management officials, the medical community, local elected officials, and the public pose many questions about a standard set of supplies that should be recommended in emergency supply kits and/or the associations between emergency supply kit preparation/use and adverse outcomes during or after disasters. There is scant available peer-reviewed literature, aside from a publication by Heagle in 2016 that frames methods by which these associations can be studied.[1]

A.5. Impact on Small Businesses or Other Small Entities

No small businesses will be involved in data collection

A.6. Consequences of Not Collecting the Information or Collecting the Information Less Frequently

To ensure an accurate assessment of the impact of the disaster, respondents will complete study activities during the period immediately after disaster impact. That period is defined as within the first four months after a disaster hits (e.g., data collection begins 2 to 3 weeks post-disaster and continues for 10 weeks). The consequences of not collecting information within this timeframe are largely related to recall bias. As time progresses, participants may not as readily remember details related to the disaster experience, what their household did to prepare, the specifics of emergency supply kit items used and needed, and any consequences of potential missing emergency supply kit items.

CDC cannot predict when disasters will occur; thus, we aim to collect information in two locations over the course of approximately 12 months from OMB approval. The consequence of collecting the information less frequently (i.e., one site only) is that results will be reported for only one type of disaster, limiting the ability to look at results across disaster types and region.

There are no technical or legal obstacles to reducing burden.

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

There are no special circumstances with this information collection package. Specifically, no special circumstances that would cause an information collection to be conducted in a manner

- requiring respondents to report information to the agency more often than quarterly;
- requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
- requiring respondents to submit more than an original and two copies of any document;
- requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;
- in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;
- requiring the use of a statistical data classification that has not been reviewed and approved by OMB;

- that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

This request fully complies with the regulation 5 CFR 1320.5.

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

A 60-day Federal Register Notice was published in the *Federal Register* on 28 August 2020, Vol. 85, No. 168, pp. 53377-79 (See Appendix B). CDC received a total of one public comment related to this notice (Appendix B1). The comment was not considered substantive and no changes to the ICR were required.

CDC partners with professional STLT organizations such as the Council for State and Territorial Epidemiologists (CSTE) and federal groups such as the CDC Disaster Epidemiology Community of Practice (DECoP). The CDC DECoP includes internal and external partners, including STLT health agencies, emergency managers, and academia. The following people outside and inside the agency were consulted to obtain their views on the availability of data, frequency of collection, the clarity of instructions, and on the data elements to be reported.

Table A.8.1 External and internal consultations for this data collection.

Name	Title	Affiliation	Phone	Email
Consultations outside the agency				
Herminia Alva	Disaster Epidemiologist	Texas Department of State Health Services	512.776.6422	Herminia.Alva@dshs.texas.gov
Tess Konen	Senior Epidemiologist	MN Department of Health	651.201.5606	Tess.Konen@state.mn.us

Svetlana Smorodinsky	Disaster Epidemiologist	CA Department of Pubic Health	510.620.3642	Svetlana.Smorodinsky@cdph.gov
Alesha Thompson	Program Analyst	Council of State and Territorial Epidemiologists (CSTE)	770.458.3811	athompson@cste.org
Consultations inside the agency				
Robin Soler	Director (Acting) Office of Applied Research	Center for Preparedness and Response	770.488.5103	rsoler@cdc.gov
Amy Wolkin, DrPH	Chief, Data Analytics Branch	National Center for Injury Prevention and Control	770.488.3402	AJF9@cdc.gov
CAPT Joseph Roth	Career Epidemiology Field Officer, US Virgin Islands	Center for Preparedness and Response (assigned to US Virgin Islands Department of Health)	404.960.0762	Jay.Roth@doh.vi.gov

A.9. Explanation of Any Payment or Gift to Respondents

Payment will be provided to participants in the form of different monetary incentives. The rationale for including incentives are to achieve a representative sample and compensate respondents for their time and effort. Survey research has shown that respondent incentives can improve a survey's quality and efficiency. Incentives can improve the response rate, improve response from hard-to-reach groups, and increase efficiency. Several federal surveys have used incentives for many decades including the National Health and Nutrition Examination Survey, Bureau of Labor Statistics' National Longitudinal Survey, and the National Survey of Drug Use and Health.

Incentives for this information collection are shown in Table A.9.1. There will be a pre-paid $2 incentive sent with the first survey packet. A promise of $10 for completing the paper survey in the packet or $20 for completing the survey via an online web-based instrument will be included in the cover letter of the packet. The rationale for offering a larger incentive for web survey completes is to encourage use of electronic data collection and reduce participant burden. Focus group participants will receive $40 for their participation. Incentives given will be in the form of check mailed to participants upon completion of survey, and cash given to participants at the end of a focus group.

Table A.9.1. Study participant incentives.

Study Activity	Number of times participant does activity	Incentive for each time participant does activity	Total incentive for activity
Open study packet	1	$2	$2
Complete survey	1 paper instrument < OR > 1 web instrument	$10 < OR > $20	$10 < OR > $20
Participate in focus group	1	$40	$40
Total			$52 < OR > $62

If all parts of the study are completed, participants will receive a total of $52 if a paper survey is completed or $62 if an online, web survey is completed. Confirmation of funds will vary depending on mechanism. For online surveys and virtual focus groups, verification will be obtained via email receipt and for mail surveys, a check will be sent and a list of cashed checks received.

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

On 31 August 2020, this project was reviewed by the NCEH Information Security Systems Officer (ISSO) who determined that the Privacy Act does not apply and this data collection does not require a systems of records notice (SORN).

PII is never stored or retained by the CDC. The following PII will be potentially collected by RTI. However, this information will not be transferred to CDC hosted servers:

- Current Address
- Name (if providing for incentive purposes, see below)
- Email (if providing for incentive purposes, see below)

Table 7.1.1.1. PII categories and justification for their collection.

IFF category	**Justification**
Current address	To confirm location during disaster
Name	Participants may provide for incentive purposes
Email	Participants may provide for incentive purposes

RTI study staff will make every effort to keep the data secure by a variety of methods. Data are entered into a password-protected database and a unique CaseID is assigned as a key identifier. All paper files are received and processed at the contractor's research operations center, in a badge-only accessed room exclusive to paper survey data collection and are stored in locked cabinets. Electronic files are stored on secured servers (i.e., ESN) with password protection and access only to project team members tasked with systems management and data monitoring. Encrypted data files are sent electronically to investigators at CDC. Data are stored on secure CDC servers in Atlanta, GA. The servers are housed in a secure computer room complete with climate control, emergency power, and an uninterruptible power supply (UPS). Daily back-ups and integrated security are implemented through the CDC computer services infrastructure. All data access is password-protected, and all network communications use encryption. All servers and PCs that are part of the CDC infrastructure are protected by both host-based firewalls and software to prevent the undetected installation of "spyware." At CDC, only our investigators are given access to read the encrypted data files.

Survey participation is voluntary. Survey participants will read information on privacy and consent in the letter that accompanies, or is on the first webpage, of the questionnaire (Attachment 4). For the paper-based survey, participants will sign the consent form (Attachment 5), complete the paper survey and return both documents in the mail. They will be provided an extra copy of the consent form in the package to keep for their own records.

Participants who choose to complete the survey online will actively consent by signing the online consent form (Attachment 5A) and continuing to survey questions. The online consent has the same wording as the paper-based consent; yet, rather than a signature, acknowledges

that by typing their name and submitting they are consenting to the survey. Participants have the option to immediately print the online consent to maintain a copy for their records. A copy of the consent will also be sent to participants along with their incentive. The online consent and questionnaire are available in English and Spanish; Spanish translation and back-translation will be conducted to ensure accuracy.

Consent for the focus groups will be obtained during the week before a scheduled focus group via email. The focus group task lead will email a consent form to each potential participant and request that they read, sign, and return the consent form via email. Mail (USPS) paper copy will be acceptable if the participant does not have equipment to scan/photo and send back the form. The consent form includes a description of the study purpose, study procedures, benefits and risks, confidentiality, compensation, and study contacts (See Attachment 7B).

Consistently with Section 301(d) of the Public Health Service Act, a Certificate of Confidentiality (CoC) applies to this research because this research is funded, conducted, or supported by CDC, involves human subjects as defined by 45 CFR Part 46, and involves information about an individual for which there is at least a very small risk, that some combination of the information, a request for the information, and other available data sources could be used to deduce the identity of an individual. Therefore, CDC and any of its collaborators, contractors, grantees, investigators or collaborating institutions that receive "identifiable, sensitive Information" as defined by subsection 301(d) of the Public Health Service Act shall not

- disclose or provide, in any Federal, State, or local civil, criminal, administrative, legislative, or other proceeding, the name of such individual or any such information, document, or biospecimen that contains identifiable, sensitive information about the individual and that was created or compiled for purposes of the research, unless such disclosure or use is made with the consent of the individual to whom the information, document, or biospecimen pertains; or
- disclose or provide to any other person not connected with the research the name of such an individual or any information, document, or biospecimen that contains identifiable, sensitive information about such an individual and that was created or compiled for purposes of the research.

Disclosure is permitted only when

- required by Federal, State, or local laws (e.g., as required by the Federal Food,

Drug, and Cosmetic Act, or state laws requiring the reporting of communicable diseases to State and local health departments), excluding instances of disclosure in any Federal, State, or local civil, criminal, administrative, legislative, or other proceeding;

- made with the consent of the individual to whom the information, document, or biospecimen pertains; or
- made for the purposes of other scientific research that is in compliance with applicable Federal regulations governing the protection of human subjects in research.

CDC and its collaborators and contractors conducting this research will establish and maintain effective internal controls (e.g., policies and procedures) that provide reasonable assurance that the research is managed in compliance with subsection 301(d) of the Public Health Service Act.

CDC will ensure the following:

1. That any investigator or institution not funded by CDC who receives a copy of identifiable, sensitive information protected by this Certificate, understands that it is also subject to the requirements of the Certificate
2. That any subrecipient that receives CDC funds to carry out part of this research involving a copy of identifiable, sensitive information protected by a Certificate understands that it is subject to subsection 301(d) of the PHS Act. Therefore, all study staff will receive training on the importance of protecting the confidentiality of human research subjects and of personal information acquired, including the collection of biological specimens.

All research subjects will be informed of the protections and the limits to protections provided by this Certificate through the informed consent process. All study staff who obtain consent from study subjects will be trained on how the Certificate protects the information collected and the limitations of the Certificate's protections.

Unless a participant chooses to provide their first and last name with their current address for the purposes of receiving the incentive for participation, no name will be recorded, rendering the survey anonymous. Specifically, addressed-based sampling assures that potential participants will be selected from addresses maintained by the United States Postal Service. This information is available to the CDC contractor and the process to obtain the addressed has been used in previous studies. This sampling approach will create an anonymous sampling frame.

Data Security. Procedures to ensure the proper and secure handling, storage, and transfer of data will be as follows: For qualitative data from focus groups, recordings and redacted interview transcripts will be stored and analyzed on password-protected workstations or servers accessible only to members of the project team. All workstations have encrypted hard drives, and access to network resources (e.g., project share drives) requires two-factor authentication. For quantitative data from the paper and online survey, Teleform and Voxco applications will be used to capture data, respectively. Data will be stored in an enhanced security network (ESN), which complies with both FIPS Moderate security control and HIPAA security requirements. Staff with access to any study data (including sampling and recruitment lists, analytic datasets) will receive data security and HIPAA training as needed. Access to study data will be restricted to only those individuals who need to work with the data based on their role in the study. Data transfers from data collection contractors and CDC will be done via a secure SFTP and will follow encryption standards. CDC's security assessment and authorization procedures (i.e., valid authority to operate—ATO) will be applied.

Data Use, Dissemination, and Privacy. CDC scientists with access to survey and focus group data will use caseIDs and not have access to names of study participants. Dissemination of results in the form of CDC reports, fact sheets, presentations, or peer-reviewed articles will present data in aggregate form only so that individual households and study participants cannot be identified from reported information. Cross-tabulations of demographic data that could potentially identify a household or individual will be assessed for small cell sizes and data will be suppressed as needed (i.e., n<5).

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

This study was submitted to the NCEH human subjects advisor and was determined to be human subjects research under 45 CFR 46. The CDC Institutional Review Board (IRB) approval memo is found in Appendix C.

CDC will collect basic demographic information including sex, race/ethnicity, and household income by strata because these data are needed to describe the study sample and assess generalizability to the population of interest. This research study's subject matter (i.e., emergency supply kit preparedness and use) is framed within the context of the disaster experience. The study will collect potentially sensitive and identifiable information about individual participants that could place them at risk if inadvertently disclosed outside the research. The study will collect a 4-item mental health screener to help show a relationship between disaster exposure and mental health status. It will also include a series of questions regarding *any* household member's prior health condition. The data are necessary for the purpose of evaluating whether the preparation and use of emergency supply kits is associated with less reporting of adverse events. These questions are commonly asked immediately after a disaster and therefore we do not anticipate any additional risk. The benefit of this information will outweigh any potential risk as they will help guide emergency plans and help better prepare communities for future disasters. If we do not collect these data, health departments and other organizations involved in disaster preparedness will be unable to refine guidance for the public on how to best prepare their households for disasters.

Questions about sensitive information associated with a participant's illegal activity, genetic information, sexual behaviors, employers/coworkers, or any other topics that could put the participant at risk for criminal liability or social stigmatization are not included in the instrument. The survey instrument includes the following sensitive information related to medical information:

1. The survey includes a 4-item mental health screener. Inclusion of these items is predicated on research that show a relationship between disaster exposure and mental health status.
2. The survey includes a series of questions on whether any household member had a health condition prior to the disaster and whether health-related issues were experienced by any household members during or shortly after the

disaster (e.g., worsening of symptoms, need to call 911, need to receive medical care).

Again, these data are necessary for the purpose of evaluating whether the preparation and use of emergency supply kits is associated with less reporting of adverse events.

Survey content areas are summarized in Table A.11.1. Attachment 1 is the paper survey instrument and Attachment 2 is the web-based survey. The focus group protocol with question content areas is included in Attachment 7 and Attachment 7D provides the focus group discussion guide.

Table A.11.1. Survey Content Areas

Content Area	# of Questions	Question Type	Analytical Purpose
Screener	4	Multiple choice	Ensures adult with knowledge of household experience completes survey and that selected household was exposed to disaster
Household type	4	Multiple choice	Characterizes household size and housing type
Disaster impact on home	6	Multiple choice	Determines level of damage and loss of services to household during and shortly after disaster
Household needs	5	Multiple choice	Collects information on items that were needed and/or available to household members at the time of the disaster
Evacuation	3	Multiple choice	Collects information on whether household members needed to leave the home during the disaster and where they went
Health needs	35	Multiple choice	Collects information at the household level (i.e., any household member, not just the participant) on symptoms of illness or injury during the first two weeks after the disaster; also collects health status at the household level by type of chronic condition (e.g., heart disease in any household member) to determine

			whether medically-frail individuals lived in the household
Preparedness	12	Multiple choice	Determines whether the household had ever discussed and/or implemented preparedness plans before disaster impact. Determines whether household created an emergency supply kit and what specific items were included in the kit. Collects additional information on knowledge, attitudes, and beliefs related to the importance of disaster preparedness and emergency supply kits as a method of self-sufficiency during disasters
Prior exposure to natural disasters	3	Multiple choice	Collects information on whether household members ever experienced other disasters to determine whether this experience is associated with preparedness
Demographics	8	Multiple choice	Collections information to assess generalizability and to use as potential confounders in tests of association

A.12. Estimates of Annualized Burden Hours and Costs

The estimate of the burden of the information collection on respondents is displayed in Table A.12.1.

It is anticipated that two sites will be selected during the study period (1,000 participants per site per year). For each site, a portion of survey respondents will complete the instrument via a web-based instrument while another will use the paper survey. Survey research data indicate that we should expect approximately two-thirds of the sample to complete the survey by web and the other third by paper. This distribution is considered along with experience that web instruments take shorter time to complete than paper surveys. It is estimated that the web

instrument will take 15 minutes to complete compared to 30 minutes for the paper instrument. In addition to the surveys, we aim to complete 24 focus group interviews per site. In total, we estimate the following annualized burden hours assuming 1 site per year over a two-year period.

Table A.12.1 Estimates of annualized burden hours

Type of Data Collection	Number of Respondents	Number of Responses per Respondent	Average Burden per Response (in hours)	Total Annualized Burden (in hours)
Two sites during total data collection period of 2 years				
Web survey	667	1	15/60	167
Paper survey	333	1	30/60	167
Focus group screener	24	1	5/60	2
Focus group	24	1	2	48
Total				384

Annualized cost to respondents for the burden hours for the collection of information is $9,876.48. Calculations are provided in Table A.12.2. The mean hourly wage rate was obtained using the U.S. Bureau of Labor Statistics May 2019 National Occupational Employment and Wage Estimates (https://www.bls.gov/oes/current/oes_nat.htm#00-0000). The average national hourly salary for all occupations is assumed for all respondents.

Table A.12.2. Estimated Annualized Burden Costs

Type of Data Collection	Number of Respondents	Number of Responses per Respondent	Average Burden per Response (in hours)	Total Burden Hours (in hours)	Hourly Wage Rate	Total Respondent Costs
Web survey	667	1	15/60	167	$25.72	$4,295.24
Paper survey	333	1	30/60	167	$25.72	$4,295.24
Focus	24	1	5/60	2	$25.72	$51.44

group screener						
Focus group	24	1	2	48	$25.72	$1,234.56
Total						$9,876.48

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

There are no additional costs to respondents.

A.14. Annualized Cost to the Federal Government

The estimated annualized cost to the Federal Government for this OMB approval is $225,302.65 and detailed in Table A.14.1. This work consists of project planning and management, developing and testing the survey questionnaire, preparation of materials, collecting data, analyzing results, and generating data reports. A CDC GS-Level 13 will be responsible for overseeing the data collection agent's work on this project.

Table A.14.1. Annualized Cost to the Federal Government

Item	Total cost	Annualized cost
CDC Costs		
FTE (GS-13) – 15% time	32,690.20	16,340.10
FTE (GS-11) – 15% time	20,231.10	10,115.55
Subtotal – CDC Costs	52,911.30	26,455.65
		Data Collection Agent – RTI International
Fixed priced for study design, design of data collection instrument, protocol development, data capture systems, data cleaning and delivery via 3-year contract	$397,694	$198,847
Total	450,605.30	225,302.65

A.15. Explanation for Program Changes or Adjustments

This is a new information collection and there is no change in burden to report.

A.16. Plans for Tabulation and Publication and Project Time Schedule

Survey data collection is scheduled to begin approximately two weeks after a selected disaster impact. The data collection period will end approximately ten weeks later. Focus groups are expected to take place within the 5 months of disaster impact. This schedule is planned for two different geographic locations. Location will be determined by disaster occurrence, affected population (e.g., large-scale impact), and, ideally, location (e.g., southeast and west coast) and disaster type (e.g., hurricane and wildfire) to provide variation in experience.

Table A.16.1 Project Time Schedule*

Activity	Time Schedule
Site selection	Disaster-type dependent (e.g., up to 2 weeks prior to hurricane; up to 1-week post start/impact of wildfire, earthquake, or tornado)
ABS sample frame drawn	1-week post site selection and/or start of disaster*
First survey packet mailing and survey invitation via email sent (if existing panel available)	2 to 3 weeks start of disaster*
First reminder postcard	1 week after first packet mailing
Second survey packet	2 weeks after first reminder postcard
Second reminder postcard	1 week after second survey packet
Survey data collection ends	10 weeks after first survey packet mailing
Survey data cleaning and analysis	12 weeks after end of data collection
Focus groups	4-8 weeks after survey data collection
Focus group analysis	6 weeks after focus groups
Reports	6-12 months after completion of data collection

* *Timeline may be adjusted based on extended evacuation and return home orders*

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

The display of the OMB expiration date will be shown on all data collection materials.

A.18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification.

References

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3. Charles M. City of Stillwater releases emergency preparedness survey results. *Stillwater News Press*. 29 July 2019

4. Pickering CJ, O’Sullivan TL, Morris A, Mark C, McQuirk D, et al. The promotion of ‘Grab Bags’ as a disaster risk reduction strategy. *PLoS Currents Disasters* 2018 1. doi: 10.1371/currents.dis.223ac4322834aa0bb0d6824ee424e7f8

5. Perman J, Shoaf K, Kourouyan A, Kelley M. Disaster kit contents: a comparison of published guidelines for household preparedness supplies. *International Journal of Mass Emergencies and Disasters* 2011 29(1):1–25.