

# Lessons Learned

## Community Assessment for Public Health Emergency Response (CASPER)



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## ***CASPER Lessons Learned***

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Community Assessment for Public Health Emergency Response, or CASPER, is a public health response and planning tool. It can provide situational awareness to public health and emergency management officials to strengthen disaster response, assist with public health preparedness planning efforts, and identify routine public health issues.

CASPER involves interviewing people in sampled households about their public health needs and issues; these are door-to-door household surveys. CASPER rapidly obtains information using a quick, reliable, and accurate technique (typical goal is 210 household interviews in a few days) and can be conducted in both disaster and non-disaster settings. A disaster response CASPER can be planned in as little as three days; a non-disaster CASPER will typically be planned over a two to three month period. Non-disaster CASPERs can be used to train staff on assessment techniques and operations in a less-stressful setting and can also be used to train and exercise on operating within an incident command structure. Examples of the uses of CASPER data include: providing information to support funding of projects (e.g. building new roads in Bastrop), strengthening messaging (e.g., enhanced health education on carbon monoxide poisoning in Galveston), and future planning (e.g., developing plans for pet shelters and education on the pet preparedness in Fort Bend County).

Over the last decade in Texas, multiple local health departments and DSHS Health Service Regions have conducted CASPERs in their jurisdictions. This document identifies high level lessons they have learned and want to share that may assist other agencies interested in conducting CASPERs. It is hoped that this shared knowledge, as a complement to the Centers for Disease Control and Prevention (CDC) CASPER toolkit,<sup>1</sup> will benefit and enlarge the CASPER community-of-practice in Texas.

The toolkit provides detailed guidelines for public health staff conducting a CASPER and identifies four general phases: 1) preparing for the CASPER, 2) conducting the CASPER, 3) analyzing the data, and 4) writing the report and sharing the results.

<b>Phase 1. Preparing for a CASPER</b>	
<i>Category</i>	<i>Shared Knowledge/Lessons Learned</i>
Objectives	<ul style="list-style-type: none"> <li>• Developing clear objectives, focused on local needs, are critical to ensuring a successful assessment</li> <li>• Inform local officials (e.g., county judge, emergency management coordinator) and solicit input on objectives</li> </ul>
Costs	<ul style="list-style-type: none"> <li>• CASPER methods and techniques are ideal for providing reliable health information more quickly and at less cost than other epidemiologic methods (e.g., telephone surveys) and are uniquely suited for disaster-related public health assessments</li> <li>• Costs for conducting a CASPER will vary based on many factors: the objectives and availability of local/in-house resources (e.g., staff time, vehicles). Ideally, in-house staff time is available to develop the objectives, develop the sampling approach, produce the maps, find the volunteers to be on the field teams, provide the training, enter the data, and write the report. Recognizing that expenses vary on many factors, costs for supplies, food, lodging, and rental vehicles may (estimate) range between \$3,000 and \$7,500</li> </ul>
Timing the assessment	<ul style="list-style-type: none"> <li>• Knowing and engaging the community is crucial. In non-disaster CASPERs, conduct the assessment when you anticipate residents are going to be home (e.g., during weekdays, from 3 – 7pm; during weekends, start after 9:30 am)</li> <li>• Avoid scheduling non-disaster CASPERs during potential competing community activities (e.g., festivals, school vacations) and during predicted weather patterns (e.g., extreme heat, rainy, and hurricane seasons)</li> <li>• For disaster-related CASPERs, it is important to engage emergency management and to consider</li> </ul>

	<p>when it is safe to enter the affected disaster areas; the assessment may be timed when residents have been allowed back into their homes after an evacuation order or after disaster threats have ended</p>
Sampling approach	<ul style="list-style-type: none"> <li>• The CASPER sampling method is flexible and is tailored to meet objectives of each incident</li> <li>• Sampling at the census block level is ideal</li> <li>• For rural areas, with known low number of housing units per cluster, it is appropriate to adjoin census blocks to create larger clusters for the sampling frame</li> <li>• In selected clusters with large number of housing units, it is appropriate to identify approximate sub-areas for the systematic sampling to occur</li> <li>• Visiting selected clusters (“ground truthing”) prior to deploying field teams is ideal to identify potential sampling issues/obstacles (e.g., gated communities, apartment buildings, stray animals)</li> </ul>
Cluster maps	<ul style="list-style-type: none"> <li>• Generating an overall cluster map and individual cluster maps is ideal</li> <li>• Generating three maps (i.e., google earth image, static street view, and directions from base camp to selected cluster) per selected cluster with details (e.g., street names, landmarks,) is optimal</li> <li>• It is ideal to print two overall cluster maps for base camp</li> <li>• Providing training to field teams on how to read these maps is critical</li> </ul>
Survey and database	<ul style="list-style-type: none"> <li>• Utilize past CASPER surveys as a guide in developing survey questions</li> <li>• Develop the survey using appropriate level language and include versions in the languages prominent in the sampling area; pretest the survey on a focus group (e.g., coworkers or residents from a similar community)</li> <li>• Realistically explore whether paper or electronic (e.g., tablets, phones) data collection is feasible; individuals should have prior knowledge and experience in using tablets and phones</li> <li>• Create a database using software people know how to use, especially those staff that will be entering data</li> <li>• Plan for how the data will be analyzed and used when designing questions</li> </ul>

Organizational structure	<ul style="list-style-type: none"> <li>Using Incident Command Structure is optimal but any organizational approach with assigned and structured roles is appropriate</li> </ul>
Field assessment teams	<ul style="list-style-type: none"> <li>Recommend 10 field teams; 15 is optimal</li> <li>Must have at least two persons per team</li> <li>Pair experienced teams members with less experienced members; pair according to needed language and interviewing skills</li> <li>Ideal to have field teams knowledgeable about or from the community</li> <li>Ideal to have health department staff with field experience (e.g., health inspectors, animal control officers, mosquito control staff) part of the field teams</li> <li>Recruitment of motivated, committed volunteers from partner agencies critical; volunteers could come from local Medical Reserve Corps, local universities, CERT, etc.</li> <li>People volunteering for the field portion should be pre-screened for health and safety issues; field work is not for everyone</li> <li>Assign experienced field teams to more challenging selected clusters (e.g., remote, potential safety issues, large number of surveys needed)</li> </ul>
Training	<ul style="list-style-type: none"> <li>At least three hours of Just in Time training prior to the assessment is essential</li> <li>Provide enough time to go over the sampling (e.g., selecting households in the selected cluster), survey (e.g., questions, skip patterns), tracking form, logistics, and command structure</li> <li>Solicit the participation of animal control and local enforcement officers to identify potential safety concerns</li> <li>Train on safety plans</li> <li>Train on communication methods (e.g., cell, radio)</li> <li>Train on the importance of the check-in and check-out process</li> </ul>
Supplies	<ul style="list-style-type: none"> <li>Pre-identify the appropriate health education materials to distribute; reach out to other local agencies to identify potential materials to distribute; ensure materials in appropriate language</li> <li>Prepared/standardized materials from outside organizations should be pre-screened to ensure consistent messaging</li> <li>Allow enough time to copy/print at least 250 copies of health education materials for distribution to households</li> </ul>

	<ul style="list-style-type: none"> <li>• Optimal if you have plastic tote boxes or other containers for all supplies (i.e., survey forms, health education materials) needed for each field team</li> </ul>
Local officials and media notification	<ul style="list-style-type: none"> <li>• Solicit participation from law enforcement to ensure they are aware of a CASPER being conducted in the community and they can make security recommendations if necessary</li> <li>• Inform the media that the assessment is planned so that the community will be aware that public health teams may be in their neighborhood</li> </ul>
Communication methods	<ul style="list-style-type: none"> <li>• Identify potential multiple communication methods (e.g., cell, radio) for field teams</li> <li>• Instruct teams to report to command center at pre-determined times to ensure safety, report on progress, and address any potential field issues</li> <li>• A mid-day in person check-in can be helpful to monitor progress and team concerns</li> </ul>
Base camp, food and water	<ul style="list-style-type: none"> <li>• Planning early and confirming arrangements for the location of base camp is essential</li> <li>• Ensure that wireless equipment is available at base camp</li> <li>• Providing meals for the teams is optimal, either through provided lunches or food coupons for restaurants in the area</li> <li>• Providing water and snacks is essential to keep teams hydrated and nourished during the assessment</li> </ul>
Technical assistance	<ul style="list-style-type: none"> <li>• DSHS regional and central (Austin) offices offer exceptional remote or on-site technical assistance to local health departments in all CASPER phases and facets of their community assessment</li> <li>• Local health departments are encouraged to use these DSHS resources to accelerate their CASPER planning and increase the potential success of their assessment</li> <li>• Requesting DSHS resources in a disaster setting should follow the normal emergency management resource request process</li> </ul>
<b>Phase 2. Conducting the CASPER</b>	
<i>Category</i>	<i>Shared Knowledge/Lessons Learned</i>
Operations	<ul style="list-style-type: none"> <li>• Setting up base camp near survey area is optimal</li> <li>• Two to three days of data collection is optimal</li> <li>• Monitor teams' progress; set up situation board at</li> </ul>

	<p>the base camp to track number of interviews completed, number of houses approached, and identify safety issues</p> <ul style="list-style-type: none"> <li>• Deploying a logistics person to the field to address logistical issues (e.g., inoperable radio) experienced by the field teams is optimal</li> <li>• Stress to team the need to review completed surveys and tracking sheets for accuracy while in the field</li> <li>• Conduct a general “hotwash” prior to demobilization; this “hotwash” will provide input from all participants on how the assessment went; in addition, conducting a “hotwash” of every interview team when they return to the base camp will yield insights on what residents told the team, what the resident asked of our teams, and how the assessment went</li> <li>• Sending a web-based evaluation survey to all CASPER command and field staff a few days after the CASPER is ideal and yields rich information on how the assessment went</li> <li>• Pre-identifying at least two data entry staff is optimal</li> <li>• Data entry can begin during the CASPER as field teams are finishing clusters/interviews, allowing data entry personnel to ask questions of the teams if necessary</li> </ul>
Communications	<ul style="list-style-type: none"> <li>• Through the use of team captains and span of control, maintain communication (e.g., radio, cell, text messaging) with the teams while they are in the field</li> <li>• Encourage the use of social media (e.g., Facebook, Instagram) before and during the CASPER on city/county webpages, and local news to increase awareness to the public, to reduce suspicion, and to keep field teams engaged</li> </ul>
<b>Phase 3. Analyzing the Data</b>	
<i>Category</i>	<i>Shared Knowledge/Lessons Learned</i>
Data analysis	<ul style="list-style-type: none"> <li>• Data analysis can be time consuming so having a strong data analyst who understands the CASPER process and part of the survey development is a definite advantage</li> <li>• Prior to analysis, data should be cleaned to identify outliers or extreme values</li> <li>• Epi Info can be used to conduct weighted analysis to account for the probability of selection; more information is available in the CDC CASPER toolkit (pages 38-43)</li> </ul>

**Phase 4. Writing the Report and Sharing the Results**

Category	Shared Knowledge/Lessons Learned
<i>Report writing and sharing</i>	<ul style="list-style-type: none"> <li>• Field report writing should be started early; drafting the introduction, background, methods, and table shells sections of the report can be written before teams return from the field</li> <li>• Utilize other CASPER field reports (whether published, presented, or shared) to help inform the structure, length, and content of the field report</li> <li>• Tailor the field report format (e.g., length, organization, and analyses) for intended audiences</li> <li>• Write the report using households as the unit of measurement rather than individuals; if this point is made early on to all those participating in planning of the CASPER (those developing database, questionnaire, etc), it will be a lot easier to avoid making mistakes (survey questions worded for household, not individuals) along the way and have data that can be analyzed, interpreted and described appropriately</li> <li>• In a disaster response, optimal to have the field report completed within 48 hours after data collection</li> <li>• Share the report widely to public health officials, city and county officials, and the community</li> <li>• Present the information at professional meetings (e.g., quarterly public health preparedness meetings) and publish in peer-reviewed journals (e.g., Texas Public Health Journal, Disaster Medicine and Public Health Preparedness)</li> <li>• Documenting the action taken (e.g., resources, support, messaging, future planning) from CASPER results is important</li> </ul>

<sup>1</sup> Centers for Disease Control and Prevention (CDC). Community Assessment for Public Health Emergency Response (CASPER) Toolkit: Second edition. Atlanta (GA): CDC; 2012. Available at: <http://www.cdc.gov/nceh/hsb/disaster/casper.htm>

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