Data Extraction and Quality Assessment: Methodology and Evidence Tables

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Table of Contents

*The tables below include summary information for the quantitative comparative and non-comparative studies included in each of the systematic reviews (Note: there were no quantitative studies for the Emergency Operations Coordination review topic). For each study listed in the tables below there are three hyperlinks to the corresponding areas of this report. Study Information links will navigate to expanded narrative study descriptions in Appendix D, while Study Design links and Risk of Bias/Study Quality links will navigate to detailed data extraction and risk of bias/study quality tables for the quantitative comparative and non-comparative studies in Appendices A-C.

Community Preparedness

Study Information	Study Design	Overall Risk of Bias/Study Quality
Coady et al., 2008	Non-randomized comparative, nonconcurrent	Poor
Eisenman et al., 2009 Glik et al., 2014	Randomized controlled trial	Moderate
Montgomery County Department of Health and Human Services, 2008	Pre-post, prospective	Moderate
Eisenman et al., 2014	Randomized controlled trial	Moderate
Hites et al., 2012	Pre-post, prospective	Moderate
Williams et al., 2018 Bromley et al., 2017 Chandra et al., 2015	Randomized controlled trial	Poor
McCabe et al., 2014a McCabe et al., 2014b	Pre-post, prospective	Moderate/Poor
McCabe et al., 2011	Cross-sectional (post-intervention)	Moderate/Poor
McCabe et al., 2013	Cross-sectional (post-intervention)	Moderate/Poor
Laborde et al., 2013	Cross-sectional (post-intervention)	Poor
McCabe et al., 2008	Cross-sectional (post-intervention)	Poor

Non-Pharmaceutical Interventions

Study Information	Study Design	Risk of Bias/Study Quality
Miyaki et al., 2011	Quasi-cluster randomized controlled trial	Moderate/Poor
Chu et al., 2010	Non-randomized comparative, retrospective	Poor
Jeong et al., 2016	Cross-sectional (post- intervention)	Poor
Lee et al., 2018	Non-randomized comparative, retrospective	Poor
Bondy et al., 2009	Non-randomized comparative, retrospective	Moderate
Adler et al., 2018	Non-randomized comparative, retrospective	Poor
Hawryluck et al., 2004	Cross-sectional (post-intervention)	Poor
Reynolds et al., 2008	Cross-sectional (post-intervention)	Poor
Kavanagh et al., 2011 McVernon et al., 2011 Kavanagh et al., 2012	Cross-sectional (post-intervention)	Moderate
Marjanovic et al., 2007	Non-randomized comparative, retrospective	Poor
Wu et al., 2008 Wu et al., 2009 Liu et al., 2012	Non-randomized comparative, retrospective	Poor/Moderate
Delaporte et al., 2013	Non-randomized comparative, retrospective	Poor
Hsieh et al., 2005	Non-randomized comparative, retrospective	Poor

Information Sharing

Study Information	Study Design	Risk of Bias/Study Quality
Baseman et al., 2016 Baseman et al., 2013 Revere et al., 2014	Randomized controlled trial	Good
van Woerden et al., 2007	Non-randomized comparative, retrospective	Poor

Methods

The following description of the methodology employed pertains to those processes developed by the Center for Evidence Synthesis in Health at the Brown University School of Public Health (hereafter, called the Brown Team) and the National Academies of Sciences, Engineering, and Medicine (NASEM) Committee conducting a review of public health emergency preparedness and response (PHEPR) practices (hereafter, called NASEM Committee). To the extent possible, methods were developed *a priori*, principally based on standard practices employed by the Brown Team, but revised based on the needs and suggestions of the NASEM Committee. However, as a general rule, systematic review entails frequent revisions to the specifics of the protocol and specific methodologies used as the teams develop a better understanding of both the needs of the review and the evidence base. Thus, *post hoc* revisions to the methods are part and parcel of the systematic review process. In descriptions of the methods, the Brown Team included descriptions of the timing of decisions made.

Preliminary Processes

Prior to involvement of the Brown Team, the NASEM Committee determined the topics to be covered, the preliminary research questions for systematic review, the scope of the questions, the literature search strategies, and preliminary literature eligibility criteria. Searches were conducted to find published articles and other available reports addressing four overarching topics (hereafter, called Topics):

- Engaging with and training community-based partners to improve the outcomes of at-risk populations after public health emergencies (Community Preparedness Capability);
- Activating a public health emergency operations center (Emergency Operations Coordination Capability);
- Communicating public health alerts and guidance to technical audiences during a public health emergency (Information Sharing Capability); and
- Implementing quarantine to reduce or stop the spread of contagious disease (Non-Pharmaceutical Interventions Capability).

Literature searches and first-pass citation screening was conducted by a team of researchers at NASEM, with input from the NASEM Committee. The searches were conducted in December, 2018 and updated in June, 2019. See the NASEM Committee's report for a detailed description of the literature search. Based on these processes, the NASEM Committee identified a corpus of 308 unique articles (and other reports) that addressed one or more of the four Topics.

Study Eligibility Criteria

As a first task, the Brown Team (after discussion with the NASEM Committee) confirmed that each article reported a primary study (of any type) that met basic eligibility criteria, as summarized here. More details are available in the NASEM Committee's report.

- Eligible **Populations**

    - Any people, organizations, or other entity responding to or preparing for any event with public health ramifications that may impact a locality, region, or wider geographic area.
        - These may include the general public or national, state, local, territorial, or tribal public health agencies, other public health practitioners or researchers, and other professionals (e.g., emergency management, health care).
        - These may include disasters and public health emergencies (e.g., hurricanes, epidemics) or other major events that may impact public health (e.g., the Pope's visit to Philadelphia).
        - Events may be real (e.g., Superstorm Sandy), simulated (e.g., a viral pandemic or toxic spill), theorized (e.g., a future hurricane), or implied (e.g., unknown events that a community may prepare for).
    - Events (if real) or studies occurred since September 11, 2001.
        - Simulation and related models were retained if they, in part, used data from older events (e.g., 1918 Spanish influenza pandemic data used to inform a simulation of a future viral pandemic).
- Eligible **Interventions** and **Comparators**
    - Community preparedness
        - Practices used to engage with and train community-based partners to assess and plan for the access and functional needs of at-risk populations who may be disproportionately impacted by a public health emergency.
    - Emergency operations coordination
        - Strategies or criteria used by public health agencies to determine when to activate public health emergency operations, with a focus on determining when public health should have a lead response role, a supporting role, or no role based on identified or potential public health consequences.
    - Information sharing
        - Practices used by public health agencies to communicate public health alerts and guidance with technical audiences during a public health emergency that include actions to increase awareness and understanding of information.
    - Non-pharmaceutical interventions/Quarantine
        - Strategies used by public health agencies to implement quarantine, including strategies to increase adherence and reduce harms.
            - *Exclude* studies of isolating unexposed people (reverse quarantine) or true isolation (of ill patients, usually in hospitals or equivalent).
    - Comparators
        - Comparators were not required, but analyses of interest included comparisons of a practice with one or more alternative practices or with no practice (e.g., usual practices).
- Eligible **Outcomes**
    - See the NASEM Committee's report for Topic-specific outcomes of interest. Overall, eligible outcomes included:
        - Health outcomes: Impacts on health, morbidity, mortality, health disparities, and other clinical outcomes

        - Intermediate outcomes: Intermediate or surrogate outcomes that are plausibly related to health outcomes (e.g., knowledge, participation in activities, coordination, information exchange, quarantine adherence)
        - Harms (non-health)
        - Other outcomes
- Eligible **Study Designs**
    - Any study design, including primary quantitative studies, qualitative research studies, surveys, simulation models, after-action reports, and related narrative descriptive studies
    - Any study duration or length of follow-up
    - Any sample size, including case reports
    - *Exclude* existing systematic reviews and non-primary studies (e.g., commentaries, editorials, opinion pieces)
- Eligible **Settings**
    - Eligible countries, as per the NASEM Committee's report.
        - In general, countries deemed to be most generalizable to the United States, taking into consideration the likely sources of relevant data
        - Variable across Topics
            - Notably, studies from any country were eligible regarding quarantine
    - Any geographic or civic setting, including urban, suburban, or rural; international, Federal, national, State, regional, city, or neighborhood; general or focused community (e.g., Latinos, Navajo), or other settings

Specific details of the final study eligibility criteria evolved to some extent during the systematic review based on discussions among the NASEM Committee, the Brown Team, and other consultant teams. See the NASEM Committee's report for a full list of collaborators. Examples include a determination of the degree to which pre-9/11 data were acceptable, final definition of quarantine, specific outcomes of interest, and specific countries of interest (for each Topic). Each article was evaluated for eligibility by the Brown Team, which communicated its determination of eligibility to the NASEM Committee. The NASEM Committee and other consultant teams provided input regarding eligibility, as necessary. However, the NASEM Committee was the final arbiter of the eligibility of each article and of the relevant analyses from each study (e.g., the pertinent outcomes).

Study Categorization

Studies were categorized into five categories:

- Quantitative comparative studies
- Quantitative non-comparative (single group) studies of specific interventions
- Surveys (descriptive only)
- Simulation (and related) models
- Qualitative research studies
- After action reports and case reports

Determination of the study categories and their criteria were based on numerous general and specific discussions between the Brown Team, the NASEM Committee, other consultant experts in qualitative research, survey studies, simulation studies, and after-action reports. Individual articles could be included under multiple categories, as appropriate (e.g., a mixed method study that reported both a survey of a sample population and a qualitative research study of a focus group). Studies were re-categorized as appropriate based on input from any or all parties. The NASEM Committee was the final arbiter of inclusion and appropriate categorization of each article.

Quantitative comparative studies included hypothesis-driven studies that compared different interventions (including no intervention or usual practices) or compared the use of interventions in different groups of people (e.g., quarantine versus non-quarantined or quarantine in different populations based on their risk of exposure). These did not include subgroup comparisons that were deemed to not be pertinent to application of the intervention. For example, studies that evaluated only demographic characteristics as predictors or risk factors for outcomes were not categorized as comparative under the premise that, for example, use of quarantine would not be determined based on education status or information sharing would not be limited to one gender. These were categorized as non-comparative. The Brown Team was liberal in its definition of comparative studies and included:

- Randomized controlled trials (RCT)
    - Including individual- or cluster-level randomization
- Nonrandomized comparative studies (NRCS), with two or more distinct intervention groups
    - Including observational comparisons of interventions, whether prospective or retrospective, concurrent or non-concurrent, longitudinal or cross-sectional, and with crude (unadjusted) or adjusted analyses
    - Including registry, database, or other cohort studies that compared different interventions
    - Including interrupted time series (e.g., before and after a change in policy)
    - Including cross-sectional surveys that compared distinct interventions (e.g., those quarantined vs. those not quarantined) were categorized as NRCS. The surveys may have occurred during or after an event.
- Pre-post studies of a single cohort of participants for whom outcomes are reported quantitatively both before and after the intervention (e.g., knowledge before and after a training exercise)
- Case-control studies

Quantitative non-comparative studies reported on single groups of participants who all received (or were exposed to) the same intervention. These studies did not compare outcomes with and without the intervention (e.g., pre- and post-exposure) or pertinent subgroups of participants as described under *Quantitative comparative studies*, above. In the tables, these studies are described as "cross-sectional (post-intervention)" studies.

Surveys included cross-sectional (or single time-point) surveys or polls with quantitative data. Studies were categorized as surveys if they were only descriptive in nature (i.e., if they did not compare interventions). Surveys with quantitative results that examined interventions in a real

event and reported outcomes of interest (i.e., that met criteria for quantitative studies) were categorized as quantitative comparative or non-comparative studies.

Simulation models included descriptive and predictive models of events. Models could include real or simulated data.

- A separate consultant team assessed the models for determination of final inclusion. The corpus of potentially relevant models was narrowed to include only those based on real event data, specific infections, and quarantine alone (e.g., not combination quarantine and antivirals or safe burial).
- The committee chose studies for detailed review based on an assessment of their methodologic approach, data sources, relevance to the Key Questions, potential implications for public health practice, and disease condition studied. Studies were excluded from detailed review if they reported major limitations to their model conclusions due to such factors as excessive uncertainty about modeling parameter values. Given the time and resources available, there were a number of well-conducted modeling studies that the committee was unable to include in its detailed review.

Qualitative research studies included articles that met fundamental criteria for qualitative research, including whether there was a formal process to sample participants (eligibility criteria), a formal process to collect data (e.g., identification of themes), and whether the research is of individuals, as opposed to institutions, databases, etc. Studies could include structured focus groups, individual interviews with a formal process, collections of observations that used a formal process to identify themes, or participatory action research.

Eligible qualitative research studies used thematic synthesis, best fit synthesis, framework synthesis, or otherwise systematically organize and analyze their data. The Brown Team excluded quality improvement projects (as qualitative research studies) unless there was a formal process used to implement the intervention or assess outcomes. The Brown Team made a preliminary determination whether studies qualified as qualitative research, with input from a qualitative research expert from the NASEM committee.

- As described in the NASEM report, a separate consultant team assessed the studies categorized as qualitative research.

After action reports and case reports included after action reports and case reports that did not qualify as either qualitative research or surveys.

- A separate consultant team reviewed and analyzed the studies categorized as after-action reports and case reports.

Study Quality

The Brown Team implemented several rounds of study quality assessment for various study types. Most of these activities were conducted prior to final determination of study eligibility and data extraction. The purpose was three-fold: 1) to assist in the process of study categorization, 2) to provide information to determine final study eligibility criteria, and finally 3) to assess the risk of bias and/or methodological quality of potentially relevant articles.

Quantitative Comparative and Non-Comparative Studies

The Brown Team reviewed the Cochrane Risk of Bias version 2.0 tool (Higgins and Green, 2011) (for RCTs) and the ROBINS-I tool (Sterne et al., 2016) (for observational studies) with a goal of selecting fewer than 10 risk-of-bias/quality domains to consider across all quantitative comparative and non-comparative study designs. These were discussed with the NASEM Committee to confirm the relevance for the guideline development process. The selection of risk of bias questions (domains) was made with the dual goals of adequately addressing important potential methodological concerns and being mindful of the available resources and time that could be devoted to assessment of methodological quality of studies with a wide range of potential study designs. Based on these discussions and considerations, the initial domains included were:

- **Study population**: whether the eligibility criteria were prespecified, clear, and uniformly applied.
- **Allocation concealment**: initially specific to RCTs, whether an adequate method of allocation concealment was employed; if the *randomization method* was inadequate, this domain was downgraded.
- **Comparator group**: initially specific to NRCSs, whether the comparator group was chosen from the same population with the same general eligibility criteria as the intervention group.
- **Power**: whether there was justification for the sample size, for example based on a power analysis; assessed for each included outcome separately; outcomes with statistically significant differences were assumed to be adequately powered.
- **Loss to follow-up**: whether there was high loss to follow-up, arbitrarily set at 20%, or if there was unequal loss to follow-up between groups.
- **Outcome**: whether there were issues with outcome measurement or ascertainment bias; unvalidated tools were downgraded; also evaluated whether outcome was measured differently in the different groups; assessed for each outcome separately.
- **Similarity**: initially specific to RCTs, whether the compared groups were similar at baseline (prior to the intervention); if there were non-minor statistically significant differences between groups, whether the differences were accounted for in statistical analyses.
- **Outcome assessor blinding**: initially specific to RCTs, assessed for each outcome separately.
- **Adjustment**: initially for observational studies only; whether the analyses account for potential group differences and confounders, regardless of whether differences were found (and reported) at baseline.

The quantitative studies that were included going into the July 2019 NASEM Committee meeting were each assessed for risk of bias/methodological quality as per the criteria above. For each study (and for each outcome, as relevant), the risk of bias was assessed as low (good methodological quality), high (poor methodological quality), unclear (e.g., if the article did not adequately report on the domain), and not applicable (e.g., regarding blinding of observational studies). The Brown Team made an overall assessment of each study's (and each outcome's) methodological quality (rated as good, moderate, or poor) upon consideration of the various domains.

At the July 2019 meeting, the NASEM Committee found the differentiation between assessment of RCTs and observational studies to be incomplete and potentially confusing. Therefore, it was suggested that each domain be assessed for all study designs. To guide this change in approach, the Brown Team also incorporated criteria from Cochrane's Suggested risk of bias criteria for EPOC reviews (Cochrane, 2017) which expands the original Cochrane risk of bias tool to selected observational studies. Thus, the Brown Team used the following criteria (and definitions) to apply to all included quantitative comparative and non-comparative studies: each outcome of each study was evaluated for all criteria and assessed as either low risk of bias (good methodological quality), high risk of bias (poor methodological quality), unclear risk of bias, or "None" for allocation concealment (and randomization) of pre-post studies. In addition, a domain was added for "Other" methodological limitations (answered as either Yes or No) to capture other important limitations noted by either the Brown Team or the study authors. Reasons for all assessments of high or unclear risk of bias and other limitations were included in footnotes. Again, the Brown Team made an overall assessment of the study (or outcome) methodology (rated as good, moderate, or poor) based on the judgment of the researchers upon consideration of the various bias domains. Not all domains were weighted equally for all study designs. For example, lack of allocation concealment or blinding of an observational study was generally considered a minor limitation; lack of analyses to account for group differences were considered a more major methodological limitation for NRCSs than for RCTs or pre-post studies. Each study (and outcome) was assessed for methodological quality by the Brown Team's senior researcher and was reviewed, and altered in discussion, by at least one other experienced team member. The NASEM Committee was also provided the opportunity to comment on assessments of methodological quality.

The final list of domains and their definitions address the concepts that the Brown Team and the NASEM Committee agreed were most important from Cochrane risk of bias tools for RCTs and for EPOC reviews and from ROBINS-I. However, not all domains covered by these tools are explicitly included, such as performance bias as assessed by participant and care provider blinding, selective reporting, or deviations from intended intervention (or co-interventions). However, these domains could be covered by the final "Other important limitations" question.

The final domains and their definitions follow:

- **Study population** (eligibility criteria). Was the included sample prespecified, clearly specified, defined, and uniformly applied? Low risk of bias (RoB) if yes, High RoB if no.
    - This domain is consistent across outcomes and study designs.
- **Allocation concealment (and randomization method).** For RCTs, was there a problem with randomization method or allocation concealment? High RoB if yes, Low RoB if explicitly no problem, Unclear RoB if insufficient reporting to judge. For NRCS (of different interventions), High RoB unless analytic methods used to adequately account for inherent baseline differences in compared groups or if it is otherwise reasonable to assume that compared groups are sufficiently similar. If pre-post study (of a single group) or non-comparative study, then "None."
    - This domain is consistent across outcomes.
- **Comparator group.** Was the comparator group chosen from same population, with same general eligibility criteria, as the intervention group? For RCTs, Low RoB. For NRCS, there is overlap between this assessment and the assessment of "Allocation." If pre-post

study (of a single group), Low RoB (unless there is an indication that groups differed pre- and post-intervention). If non-comparative study, then "None."
    - This domain is consistent across outcomes.
- **Sample size.** Was there a justification of the sample size or power/analysis, per outcome? High RoB if no, Low RoB if yes (and the sample size was reached) or if the analysis was statistically significant.
    - This domain may differ for each outcome, but was consistent across study designs.
- **Loss to follow-up.** Was there high loss to follow-up, arbitrarily set at 20%, or was there was unequal loss to follow-up between groups? This is based largely on comparisons between enrolled (or randomized) individuals and the numbers analyzed. High RoB if yes, Low RoB if no.
    - This domain may differ for each outcome, but was consistent across study designs.
- **Outcome measurement or ascertainment bias**. Was there a problem with how each outcome was measured? High RoB if unvalidated subjective outcome. For studies comparing different interventions, includes whether outcome was measured differently in the different intervention groups.
    - This domain may differ for each outcome, but was consistent across study designs.
- **Group similarity at baseline**. Were the groups (intervention and comparator) similar at baseline? If similar, Low RoB. If there is a (non-minor) difference, for each outcome was the difference statistically accounted for? Judgment of whether a difference was "non-minor" depended on both statistical and clinical significance. Unclear RoB only if baseline descriptions were omitted or were too sparse to evaluate for possible differences. If pre-post study (of a single group), Low RoB (unless there's an indication that groups differed pre- and post-intervention). If non-comparative study, then "None."
    - This domain may differ for each outcome (primarily based on whether adequate statistical adjustment was conducted).
- **Outcome assessor blinding**. Regardless of study design, was the outcome assessor blinded or were there methods to minimize biased outcome assessment? "Hard" outcomes (unambiguous, potentially like death) or outcomes based on objective measurements (e.g., laboratory measurements or governmental records, such as number quarantined) generally qualify as Low RoB, as do outcomes that are explicitly blinded. Other outcomes from observational studies are assumed to have High RoB unless otherwise indicated. Self-reported outcomes are typically High RoB unless the participants are blinded to their intervention.
    - This domain may differ for each outcome, but was consistent across study designs.
- **Group differences/confounders.** Did the analyses account for potential group differences or confounders, for example by multivariable adjustment or propensity score analysis? For RCTs, assume Low RoB unless there is a suggestion of a lack of similarity between groups (despite randomization). For NRCS, regardless of whether groups were similar at baseline, High RoB if they did not adjust for potential differences or if they adjusted only for something minor or insufficient (e.g., only sex across disparate

populations). For pre-post studies, Low RoB (unless there is an indication that groups differed pre- and post-intervention). If non-comparative study, then "None."
    - This domain may differ for each outcome.
- **Other** important limitations per data extractor or as reported by study authors.
    - This domain may differ for each outcome, but was consistent across study designs.

Surveys

Based on our categorization, surveys were descriptive in nature. In discussion with the NASEM Committee about how surveys were expected to be used to support the recommendations, the Brown Team evaluated only survey-specific methodological issues for these studies. Based on "Reporting Guidelines for Survey Research" by Bennett et al., 2010, and methods used to assess surveys by Davids and Roman (2014) the Brown Team assessed the following domains (Davids and Roman, 2014):

- **Adequacy of survey tool development**: Low RoB: *A priori* methodology with group development and pre-testing, reported that survey has been validated and/or found reliable. High RoB: Lack of structured methodology for developing questions, single person/group developed and/or no outside input, no pilot, field, or pre-testing of questions (or prior use). Unclear RoB: No or incomplete description of development process.
- **Study population eligibility criteria prespecified and uniformly applied**: Low RoB: Explicitly reported, clear, and no major deviations from protocol. High RoB: Not prespecified or major deviation from protocol. Unclear RoB: Not reported whether prespecified or whether deviation.
- **Adequacy and appropriateness of polling/sampling methodology**: Low RoB: Everyone who met criteria (universe, census); probability sampling (e.g., random selection of telephone / email / text of population with high access to these technologies); other unbiased sampling of population of interest. High RoB: Problems, such that sampling is likely biased (e.g., texting may miss low socioeconomic status, hard-to-reach), non-probability sample (e.g., for focus group, convenience sample); if sample of general population there was no attempt to capture those hard-to-reach (e.g., those with no phone, email). Unclear RoB: Not adequately described.
- **Respondents non-representative of the target population**: Low RoB: Respondents representative of target population and not different than non-respondents. High RoB: Explicitly non-representative; respondents differ from non-respondents or target population. Unclear RoB: No description of target population or non-respondents (and not High RoB).
- **Percent who responded**: The actual response rate, without a judgment of its adequacy.
- **Information on margin of error reported**: Low RoB: If margin of error calculations made and reported, the reported values were extracted. Unclear RoB: No information on margin of error calculations. (While margin of error is a concept related to precision and not bias, the same terminology (High, Low, Unclear) was used for clarity and consistency.

Surveys that met criteria for quantitative comparative or non-comparative studies were categorized as such. The Brown Team evaluated these selected survey studies using the criteria

for quantitative comparative studies. This was done for survey studies that the NASEM Committee deemed to be of sufficient interest for inclusion in its evidence synthesis for effectiveness. Data extraction tables and quality assessment ratings for the surveys are available in Appendix G.

Simulation Models

Of note, all articles of simulation models pertained to the quarantine (non-pharmaceutical interventions) Topic. The Brown Team did not evaluate the methodological quality of the models, *per se*, but instead extracted basic information about the goals, methods (e.g., source data, quarantine strategies, model type), and findings of the models. This information was used by the NASEM Committee to select those models (articles) that were most pertinent to the NASEM Committees processes and recommendations. Extracted data are described below.

Qualitative Research Studies

In consultation with the qualitative research expert on the NASEM committee, the Brown Team adapted the Critical Appraisal Skills Programme (CASP) Qualitative Checklist (CASP, 2018) for assessing the methodological quality of qualitative research studies. This assessment served to confirm that each study did in fact qualify as qualitative research. The CASP checklist was not designed to assess whether a study met the standards (or criteria) for qualitative research, but instead was designed to help a researcher systematically think through the issues of whether a reported study results are valid, what those results are, and whether the results will "help locally." The Brown Team, therefore, adapted the questions in the CASP checklist to be more amenable to addressing whether a published study was qualitative research. For example, the statement to "consider if the researcher has justified the research design" was transformed into "Did the researchers justify the research design?" Explicit text was sought to address each question. The 10 numbered overarching questions (e.g., "Was there a clear statement of the aims of the research?") were maintained and the answers to these questions were based on both the answers to each sub-question (e.g., "Was the importance described/reported?") and a simple answer to the overarching question. The list of revised CASP questions is included in Appendix E. The Brown Team did not provide an overall assessment of the methodological quality of the qualitative research studies.

After Action Reports and Case Reports

The Brown Team did not assess the methodological quality of the after-action reports and case reports.

Data Extraction

The Brown Team conducted several rounds of data extraction at different levels of comprehensiveness for the different categories of studies. This process was used to assist the NASEM Committee to determine how the different categories of studies (by study design) would be used and to refine eligibility criteria. The final set of extracted data was used in the NASEM Committee's evidence synthesis.

First, for all articles, the Brown Team extracted data on:

- Primary aim (hypothesis testing, descriptive)
- Study design

- Whether quantitative outcomes were reported
- Country
- Dates of intervention
- Target population (e.g., general population, vulnerable population, specific occupation/role, specific race/ethnic group)
- Enrolled entities (e.g., general population, healthcare setting, public health setting, emergency organization)
- Entity that delivered the intervention (e.g., public health team, health care provider, emergency management)
- Disaster lifecycle phase (preparedness, response, recovery, not reported)
- Format of "emergency" (real event, simulated event [including hypothetical, exercises, models], no event [e.g., for preparedness], not reported)
- Intervention components tested (based on the Community Guide[1])
    - Provision of information only[2]
    - Training/education[3]
    - Behavioral interventions[4]
    - Environmental interventions[5]
    - Public health or medical system interventions[6]
    - Legislation/Regulation/Enforcement[7]
    - Other / None / Not applicable / Unclear
- Topics of interest (Public Health Emergency Preparedness and Response Capabilities)
    - Community preparedness (engaging and training community-based partners)
    - Non-pharmaceutical interventions (quarantine)
    - Information sharing (communicating public health alerts and guidance with technical audiences)
    - Emergency operations coordination (activating public health emergency operations)

[1] See Community Guide for further details: https://www.thecommunityguide.org/sites/default/files/assets/abstractionform.pdf

[2] Provision of information only: These interventions try to change knowledge, attitudes or norms.

[3] Training/education methods might involve instruction (e.g., classes, assemblies), small media (e.g., brochures, leaflets, posters, letters, newsletters) or large media (e.g., television, radio, newspapers, billboards).

[4] Behavioral interventions: These interventions try to change behaviors by providing necessary skills or materials. Intervention methods might involve modeling or demonstration, role playing, participatory skill development, individual benchmarking (i.e., goal-setting and achievement), providing feedback, providing incentives or penalties, or providing materials necessary to perform the desired behavior (e.g., condoms, car seats).

[5] Environmental interventions: These interventions try to change the physical and/or social environment to promote health or prevent disease. Interventions in the physical environment might involve adding to (e.g., fluoride in water systems), changing (e.g., resilient playground surfaces) or subtracting from (e.g., lead in gasoline and paint) the environment. Interventions in the social environment might include increasing employment opportunities (e.g., welfare-to-work programs) or developing community coalitions to change social systems (e.g., Detroit's "Angel's Night" anti-arson program).

[6] Public health or medical care system interventions: These interventions aim to change the public health or clinical care systems to increase or improve delivery of services (system-focused). Examples: development of registries and surveillance systems, incentives to develop hospital policies for standing orders for vaccine administration.

[7] Legislation/Regulation/Enforcement: These interventions try to change behaviors or alter disease risk factors by legislating particular behaviors, regulating risk factors, and enforcing those laws and regulations. Examples: mandatory seat belt use laws, school vaccination laws, increasing tobacco taxes.

- Outcome domains, per Topic; specific domain (e.g., health disparities) within:
    - Health outcomes
    - Intermediate outcomes
    - Harms
    - Values and preferences
    - Resource use
    - Equity
    - Acceptability
    - Feasibility
    - Other

The first five data items (aim, design, outcome types, country, dates) were extracted in part to help determine study eligibility. The target population, enrolled entities, and intervention deliverers were extracted to categorize studies based on generalizability (who was involved in the intervention).

The interventions were categorized by the disaster phase, the format of the emergency, and the intervention components, which were, as noted, based on the Guide to Community Preventive Services. Interventions were further categorized based on the *a priori* list of topics of interest (the Capabilities).

The list of outcomes of interest were selected *a priori* by the NASEM Committee. They were derived from a preliminary literature review for each of the review topics and committee discussion. Additional outcomes were identified and added as the committee reviewed the included articles.

Among the studies with quantitative outcomes, the Brown Team tabulated the numbers of studies, by Topic, that were U.S.-based, from high-income countries; were impact or descriptive; evaluated real disasters, simulations, or no disasters; were of different study designs/categories; and reported health outcomes, intermediate outcomes, or other outcomes.

Based on this information (together with short lists of articles that met highly specific criteria) and issues that the Brown team encountered during extraction of study information, it had discussions with the NASEM Committee (by email and by phone) regarding a number of issues:

- Pre-9/11 events (e.g., Y2K preparedness, Spanish flu)
- Outcomes of interest
- Studies from non-included countries (particularly East Asia and sub-Saharan Africa)
- Existing systematic reviews and narrative reviews of primary studies
- Non-disasters (e.g., influenza vaccination, Pope's visit)
- Simple descriptions of events that occurred
- Studies related to animals (e.g., a dog of a patient with Ebola, farm animals)
- Quarantine vs. similar interventions (social distancing, isolation)
- Need for clarification of eligibility criteria for qualitative research studies (and definitions thereof)
- Difficulty categorizing outcomes into an *a priori* list of outcome categories.

Discussions about these topics informed decisions regarding the final categories of studies, eligibility criteria, and other process methods.

The Brown Team used the Systematic Review Data Repository (https://srdr.ahrq.gov) for initial data extraction (for the elements described above). SRDR is a publicly available, open-source, online data extraction software and database developed and maintained by the Center for Evidence Synthesis in Health at the Brown University School of Public Health, the Center in which the Brown Team is located. Subsequent extraction of basic data and methodological quality assessment of the qualitative research studies, surveys, and simulation models was conducted in SRDR or using Google Sheets and/or Excel. Full data extraction and methodological quality assessment of the quantitative comparative studies was conducted directly into tables designed in Microsoft Word.

Quantitative Comparative and Non-Comparative Studies

A template of the extraction tables (into which data were directly extracted) is in Appendixes A-C. The included elements were based on standard data extraction processes, including the items in the TIDieR checklist (Hoffmann et al., 2014). In addition to generic elements (e.g., study design, country, quantitative results), items were included to capture concepts specific to the topics under evaluation and the needs of the NASEM committee. The form was created in an iterative fashion and was improved and customized as the Brown Team extracted each article and received feedback on draft tables. Whenever changes were made, the Brown Team cycled back to previously extracted articles to ensure complete data extraction.

The extractions were conducted by one senior methodologist and reviewed in detail by at least one other experienced methodologist.

Overall, the extraction tables included

- Basic information about the studies (e.g., study design and country)
- Description of the entities enrolled, the target population, and the deliverers (implementers) of the interventions
- Summary of the study goals/aims, primary and secondary outcomes, and study timing
- Brief descriptions of the interventions that included name, timing, site delivered, rationale, and the intervention components (per the Community Guide)
- Detailed descriptions of the interventions
- Implementation issues, including
    - Costs and resources
    - Values and preferences
    - Barriers
    - Facilitators
    - Acceptability
    - Equity
    - Collaboration needs
    - Ethical issues
- Quantitative results
- Study and review conclusions, including
    - General conclusions
    - What worked
    - What didn't work
    - Implications
    - Limitations

    - Future Research
    - Comments from the Evidence Review Team
- Risk of bias/Methodological quality, as described above

Surveys

The Brown Team extracted only basic information about the design of the survey studies, including country, type of event, target population, eligibility criteria, sample frame, sampling method (e.g., random, convenience), format of survey recruitment (e.g., database, email solicitation), format of survey delivery (e.g., phone, web survey), type of survey development (e.g., previously used, validated, *de novo*, testing process), and dates of survey.

To assess the potential utility of each survey article to the NASEM Committee, the Brown Team matched each survey item (outcome) in each article to the pertinent Key Question developed for each Topic. The Brown Team also assessed whether the outcome was assessed purely descriptively (e.g., the percentage of respondents agreeing) or comparatively (generally between subgroups; e.g., urban vs. rural). The Brown Team also extracted survey results for survey questions (outcomes) deemed to match outcomes of interest. These data were mostly either percentages of respondents or means (and standard errors or confidence intervals) of continuous variables. When available, the Brown Team also extracted data for subgroups of interest based on whether the subgroups were actionable (e.g., accredited vs. non-accredited) or involved equity or disparity issues (e.g., by race). Data extraction tables and quality assessment ratings for the surveys are available upon request.

Simulation Models

The Brown Team extracted only basic information from simulation model articles, including the model objective/research question, source data used (real or theoretical; country[ies]; year[s]), disease being simulated, target population, strategies evaluated (e.g., specific forms of quarantine and isolation with or without other behavioral or pharmacological interventions), model type (e.g., agent-based, ordinal differential equation), nature of the dynamic (deterministic [single answer], stochastic [range of answers]), and whether or not sensitivity analyses were reported.

Qualitative Research Studies

The Brown team did not extract further data from the qualitative research studies beyond what was in the CASP assessment and the preliminary set of data extractions.

After Action Reports and Case Reports

The Brown team did not extract further data from the after-action reports or case reports, beyond what was in the preliminary set of data extractions.

Meta-Analysis

The NASEM Committee and Brown Team had the goal of conducting meta-analyses if there were sufficient adequate data. No restriction was put on the number of studies that could be meta-analyzed, but it was agreed that meta-analysis would require studies that evaluated sufficiently similar enrolled entities, intervention deliverers, interventions, comparisons, and outcomes. Ideally, studies would have the same study designs. When necessary (and appropriate), different specific outcomes would be transformed to the same measure (e.g.,

different measurements of anxiety), including by calculations of standardized effect sizes. However, measures of different constructs/outcome domains (e.g., anxiety and alcohol use) would not be combined. Also, for each meta-analysis only a single outcome from each included study would be used (e.g., two different measures of depression from one study would not be combined with a third measure from another study). *A priori*, we discussed allowing flexibility for each of the criteria, given the heterogeneous nature of studies evaluating emergency preparedness and response, and also with the understanding that a goal of this report is to provide a framework and example for future endeavors in the field.

Although many other specific pairwise meta-analyses are feasible and appropriate, the Brown Team planned to conduct random effects model restricted maximum likelihood meta-analyses of odds ratios (for binary categorical outcomes) or of differences or net differences (difference-in-differences, for continuous outcomes). As needed, standard errors would be calculated (or estimated) from reported standard deviations, confidence intervals, or P values. If necessary, the standard deviation of within-group changes (i.e., post- minus pre- values) would be estimated from the standard deviations before and after intervention, with a frequently-used assumption of a correlation, r, of 0.5 (Balk et al., 2013). If meta-analyses of simple proportions were to be conducted, the Brown Team would have meta-analyzed arcsine-transformed proportions to normalize data that would otherwise be truncated at 0 or 1(Trikalinos et al., 2013). Standardized effect sizes would be calculated with standard methods, such as Cohen's *d*.

Among the included quantitative comparative studies, two reported similar interventions and similar outcomes. Eisenman et al. (2009) conducted a RCT to test a disaster preparedness program for Latino households. One study arm included training on disaster preparedness. The Montgomery County Department of Health and Human Services (2008) reported a pre-post evaluation of community education also on disaster preparedness. Both articles reported, both pre- and post-training, whether community participants had a disaster plan, had stockpiled water, and had stockpiled food. Based on these similarities, the Brown Team investigated the potential value of meta-analyzing these outcomes. However, the Montgomery County study reported data on different numbers of participants pre- and post-training and did not report statistical analyses of changes. Thus, we were unable to confidently estimate a standard deviation of the change in proportion of prepared individuals. Furthermore, about three times as many people in the Eisenman study had food and water before the training than in the Montgomery County study; thus the changes in preparedness were highly heterogeneous between studies ($I^2 \approx 98\%$ in crude, preliminary meta-analyses, where I^2 describes the percentage of the variability in effect estimates that is due to differences in study results rather than chance). For these reasons, we do not report meta-analysis results.

Results: Study Inclusion

After preliminary screening by NASEM staff, we had a corpus of 305 unique records (articles and other documents) of potential interest. Of these, 12 were rejected by the Brown team for being existing systematic reviews or conference abstracts (10 articles) or covering pre-9/11 events (2 articles). Of the remaining 293 records, 63 concerned Community Preparedness, 128 concerned Quarantine, 41 concerned Information Sharing, and 64 concerned Emergency Operations Coordination. Three articles addressed two topics each (quarantine and information sharing, 1 study; information sharing and emergency operations coordination, 2 studies).

Among the 293 unique records, the Brown Team (with input from the Committee and other teams), classified 40 records as quantitative (impact) studies, 44 as descriptive surveys, 48

as simulation models, 62 as qualitative research studies, and 106 as after action reports, case reports, or other narratives. Six records were classified in multiple categories: 3 as both quantitative studies and surveys and 3 as both qualitative research and surveys). *Please note, the numbers below reflect the Brown team's initial categorizations, and numbers have changed slightly as the committee undertook its review. See the NASEM Committee's report for a final PRISMA and listing of the relevant studies.*

Among the 40 records of **quantitative studies**, 26 studies (reported in 36 records) met sufficient criteria for inclusion in evidence tables, and thus for detailed extraction (by the Brown Team) and consideration (by the NASEM Committee). Several studies were included by the Brown Team as quantitative studies but were either excluded by the NASEM Committee based on further consideration of whether the interventions, populations, comparisons, and outcomes met eligibility criteria (4 records), or were reclassified as different design types (e.g., after action reports). Conversely, several studies were initially rejected by the Brown Team but added in by the NASEM Committee when analyses of interest were noted. Ultimately, 11 quantitative studies (in 16 records) were included for Community Preparedness 7 comparative, 4 non-comparative), 13 studies (in 17 records) were included for Quarantine (9 comparative, 4 non-comparative), and 2 studies (in 3 records) were included for Information Sharing (both comparative). No quantitative studies of Emergency Operations Coordination met eligibility criteria.

Among the 44 **survey** studies, 15 were omitted from full extraction and tabulation because they did not report survey questions that addressed any of the Key Questions, Context-Informing Questions, or Evidence-to-Decision Questions. Thus 11 records were included for Community Preparedness, 15 records were included for Quarantine, 12 records were included for Information Sharing, and 7 records were included for Emergency Operations Coordination. One record reported survey results pertaining to both information sharing and emergency operations coordination.

Among the 48 **simulation models**, all pertained to Quarantine. Thirteen met full eligibility criteria for detailed evaluation by a separate consultant team. The other 35 models were not based on real epidemic data, were not based on data pertaining to a specific infection or were based on the 1918 Spanish influenza pandemic, or were not specific to quarantine (e.g., they evaluated combined quarantine and safe burial practices). The Brown Team provided a summary of the models not included in the detailed review to the NASEM Committee that summarized their research questions and goals (and how they may have differed from the NASEM Committee's research questions) and issues pertaining whether the models found (or assumed) quarantine to be effective to minimize infections.

The Brown Team categorized 62 articles as potentially meeting criteria as **qualitative research studies**. Of these, 23 pertained to Community Preparedness, 16 pertained to Quarantine, 10 pertained to Information Sharing, and 15 pertained to Emergency Operations Coordination (one article pertained to both Quarantine and Information Sharing, and a second article pertained to both Information Sharing and Emergency Operations Coordination). These studies were shared with a separate consultant team for further evaluation.

The Brown Team categorized 106 articles as narrative descriptions of potential **after action reports** or **case reports**. Of these, 16 pertained to Community Preparedness, 33 pertained to Quarantine, 16 pertained to Information Sharing, and 41 pertained to Emergency Operations Coordination. These studies were shared with a separate consultant team for further evaluation.

Lessons Learned

Many insights were gained during the collaboration of the NASEM Committee (composed of domain experts, some with expertise in systematic review and clinical practice guideline development) and independent teams of methodological experts, including the Brown Team (with expertise in systematic review and guideline development), and experts in qualitative research, mixed methods studies, simulation models, and systematic reviews.

As expected going into the review of the example topics of public health emergency preparedness and response practices, it was challenging to clarify what the specific key questions and study eligibility criteria should be to best inform a guideline. It was known that for most topics, there is a relative paucity of primary studies, particularly related to comparative effectiveness. Contemporary guidelines are largely based on research evidence, as opposed to expert opinion. Regarding effectiveness, the most useful studies compare different treatment options. These allow guideline development committees to, potentially, recommend one option (or a set of options) over another, based on the balance of relative benefits and relative harms between options.

Equally important for guideline development is an understanding of the range of preferences for outcomes, how interventions should be implemented, and who should be involved. Despite a committee's best efforts, it will never fully represent the range of experiences and interests in the general public, particularly the views of underserved and under-represented communities. Qualitative research, mixed methods studies, and surveys can provide the guideline development committee with insights into these important factors.

- All interventions evaluated by the NASEM Committee were complex, generally having multiple components that address different aspects of care. None, even quarantine, was a simple, easy-to-define and understand intervention that could be replicated faithfully after reading a relevant study. (As a counter-example, a drug treatment for post-radiation exposure prophylaxis can be easily replicated.) All met the definition of complex (Kelly et al., 2017), including having multiple components (intervention complexity) and complicated or multiple causal pathways, feedback loops, synergies, and/or mediators and moderators of effect (pathway complexity). They generally targeted multiple participants, groups, or organizational levels (population complexity); required multifaceted adoption, uptake, or integration strategies (implementation complexity); and worked in a dynamic multi-dimensional environment (contextual complexity).
    - As such, it was challenging for the Committee and the Methodology Teams to determine which interventions fell within or outside the scope of the topics. Simpler examples included whether "quarantine" included in-hospital isolation of infectious individuals. More difficult assessments included decisions about whether processes in an emergency department would qualify as emergency operations coordination.
    - Final determination of eligible interventions required frequent discussions among the Committee and with the Methodology Teams that focused around evaluating specific examples that arose during the review of potentially eligible studies. It was not infrequent that final decisions required the insights of a given expert who was particularly knowledgeable about the intervention under review. It was also common that the Committee required a full assessment of a study before the multifaceted aspects of an intervention were clear. Thus, it was necessary to fully

evaluate, present, and discuss a large number of interventions in detail before a determination was made to exclude the study.

- The NASEM Committee determined *a priori* outcomes categories of interest prior to contracting with the Brown Team. The NASEM Committee also identified and added additional outcomes as included articles were reviewed. The Brown Team agreed that all the outcome categories were important (i.e., they did not recommend dropping any outcomes). However, the outcome categories tended to be broad (e.g., morbidity, harms, equity). Therefore, determinations needed to be made as to whether each reported outcome fell into one of these categories and was of interest. The Brown Team tried to err on the side of inclusiveness (i.e., extracting more outcomes than may be of interest to the NASEM Committee). In some instances, the NASEM Committee had to request that additional outcomes be included. Thus, for determination of outcomes of interest, iterative and frequent discussions between the NASEM Committee and the methodologists were required.
- Early in the process, the NASEM Committee determined that it wanted to focus, in part, on comparative studies. Initially, this seemed a straightforward determination. However, when the NASEM Committed and the Brown Team started to evaluate specific studies, it became clear that determination of whether a study is "comparative" is variable. Given the state of the evidence, a decision was made to be flexible and generally inclusive in definitions of comparative studies. A decision was also made to be more inclusive of quantitative non-comparative studies that provided sufficient results to inform the NASEM Committee's findings
    - Given the state of the evidence (i.e., that relatively few multi-arm, comparative studies exist on the topics of interest), a decision was made early to include as "comparative" single-group studies with data both before (pre) and after (post) the intervention studies. (Note that true pre-post studies compare a period of time before the intervention, or change in practice, and a period of time after start of the intervention, usually in distinct groups of participants.) In most systematic reviews of medical topics (e.g., those conducted by the AHRQ EPC Program) single group studies with pre- and post-intervention data would not be categorized as comparative studies and thus would have been excluded.
    - Because in certain instances it was determined that the non-comparative studies provided pertinent findings that were not addressed by the quantitative comparative studies, informative quantitative non-comparative studies were included for full evaluation.
        - Thus, we not only included comparisons of distinct interventions (or between intervention and no intervention), but also comparisons across "implementable" subgroups. By this, we mean that a policymaker could, reasonably, choose to implement the intervention (or prioritize the intervention) in a given subgroup of people.
            - For the Community Preparedness Topic, examples included single group (cross-sectional, post-intervention only) assessments of self-reported and objective effectiveness of training sessions (e.g., knowledge) and completion of disaster plans.
            - For the Quarantine Topic, examples included comparisons of the effect of quarantine on different groups based on their exposure

risk or whether they are actively infected, or of different groups based on job status or expertise (e.g., healthcare workers vs. lay public, doctors vs. nurses, those with or without access to sick leave).
    - We also included comparisons of variations of interventions, such as duration and strictness of quarantine.
    - Particularly for (adverse) mental health outcomes, we also included some subgroup comparisons to elucidate the potential harms of interventions in important categories of individuals. Examples included people with greater or lesser risk of specific mental health conditions (e.g., anxiety, depression), or with or without a history of substance abuse.
- It should be noted that many of the items that were extracted and summarized required subjective assessment, primarily done by systematic review methodologists who were not specifically expert in emergency preparedness.
    - As is common across all clinical topics, authors often do not consistently distinguish between primary and secondary outcomes. Determination of one (or more) primary outcome by the reviewer can be arbitrary.
    - Study authors commonly did not clearly state the rationale behind interventions of interest.
    - Most of the "Implementation Issues" are commonly either not directly addressed by study authors. Frequently these issues had to be inferred from reported results, or commonly, from the Discussion sections of articles. These issues included cost/resources, values/preferences, barriers, feasibility, acceptability, equity, collaboration needs, and equity issues. Given the interpretative nature of these issues, frequent discussions and clarifications were needed between the NASEM Committee members and the Brown Team.
    - Similarly, most of the "Study Review and Conclusions" parameters were subjective, requiring the Brown Team to infer concepts or themes from the articles' Discussion sections. In particular, it was subjective (and thus, often arbitrary) which reported conclusions were "important" enough to include in the Summary Tables. Furthermore, some of the conclusions had to be gleaned from reported results that were not directly analyzed by the study authors to address the conclusions of interest to the NASEM Committee. These conclusion parameters included "general conclusions", "what worked", "what didn't work", implications, limitations, and future research. In addition, the Brown Team often included their own conclusions that may not have been discussed by the study authors (these were noted as such). In particular, the Brown Team derived general conclusions and what worked/didn't work from the study results, and added methodological limitations not noted by the study authors.
- Determination of the most appropriate method to assess studies' methodological quality (or risk of bias) required iterative discussions between the NASEM Committee and the Brown Team. While there are standard lists of methodological quality assessment questions, as is commonly required for systematic review of complex topics, we had to decide which specific quality questions to pose and how to interpret these. Inclusion of

all questions in the Cochrane RoB 2.0 and ROBINS-I tools (to give just two examples) would have been highly resource intensive for the methodology team and, likely, overwhelming for the NASEM Committee. An important consideration for the evaluated body of evidence was the high variability in study designs across "comparative" studies of interest. In teleconference discussions, the NASEM Committee and Brown Team agreed upon the most important factors to assess methodological quality. We also discussed how to simplify (or condense) quality domains with the goal of asking no more than about 10 methodological quality questions per study.

In the initial set of assessments of the quality of the comparative studies, the Brown Team evaluated randomized, non-randomized, and single group studies differently since many of the questions in the Cochrane RoB 2.0 and ROBINS-I tools are design-specific (e.g., randomization method and allocation concealment, blinding, sample size justification). However, when presented with these analyses—particularly when attempting to make determinations about overall study limitations for the grading process—the NASEM Committee found the variable presentations of quality assessment to be confusing and counterintuitive. Thus, a revised approach was taken wherein the Brown Team assessed the quality domains more consistently, but also more broadly, across studies. Thus, for example, in the first iteration, allocation concealment (and randomization method) were assessed only for RCTs, but in the revised assessment, NRCSs were assessed on their analytic methods to adjust for the lack of randomization. This allowed the NASEM Committee, conceptually, to assess the risk of bias consistently across all studies and topics.

- Of note, general review criteria and processes were mostly discussed and agreed upon by the NASEM Committee and the Brown Team during monthly teleconferences and subsequent email exchanges. These included items such as definitions of study designs and whether to restrict to US-based studies. However, specific criteria and decisions were largely finalized during face-to-face meetings when summaries of extracted studies were presented. These included items such as the exact definition of emergency operations coordination, what is a comparison of interest, specific outcomes of interest, and details about how to assess risk of bias and implement the evidence profile tables.

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Appendix A – Community Preparedness

Coady, MH; Galea, S; Blaney, S; Ompad, DC; Sisco, S; Vlahov D; Project Viva Intervention Working Group. **2008**. Project VIVA: A multilevel community-based intervention to increase influenza vaccination rates among hard-to-reach populations in New York City. *American Journal of Public Health* 98(7):1314-1321. **PMID 18511725**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, nonconcurrent	Project VIVA	US	East Harlem and Bronx, NYC, NY	None (Flu vaccination)	2004-05

Studied entities and populations

- **Entities enrolled**: Neighborhoods, CBOs
  - ❖ Outreach to community members, organizations, and leaders; Outreach workers, clinician, nurses.
- **Target population**: Economically disadvantaged, urban population
  - ❖ Individuals in 8 racially and ethnically diverse and economically disadvantaged locations in East Harlem and the Bronx. These 3 neighborhood areas in East Harlem and 5 in the Bronx were 6 to 8 blocks in size and were chosen through a participatory decision-making process with members of the intervention working group. The neighborhoods were also chosen on the basis of existing partnerships with CBOs in the area and because the neighborhoods included areas in which hard-to-reach populations were known to congregate.
- **Deliverer/Implementer**: Staff and medical personnel
  - ❖ Undefined research "staff"; Pilot phase: team of 4 outreach workers and 1 clinician; Full implementation: 4 teams of 2 nurses and 4 outreach workers.

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Develop, implement, and assess a rapid-vaccination protocol for hard-to-reach populations (that would increase interest in vaccination, provide free vaccination during 2 influenza seasons, and establish a model for the rapid vaccination of individuals that could be generalizable to other urban areas)	• Interest in receiving influenza vaccination	Implicitly • Vaccination rate • Doors opened	*During intervention*: Results refer to the data collected at the time of the intervention (which was a one-time event)

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Rapid vaccination protocol	Door-to-door vaccination	Promotion: Aug-Oct. Vaccination: Sept-Oct (early flu season). 10 working days.	Community-wide (Home, door-to-door)	Aim to overcome individual, social, and contextual factors related to access to, and acceptance of, the influenza vaccine among hard-to-reach populations	• Provision of information (not "only") • Public health or medical system interventions

Intervention, detailed

- Rapid vaccination protocol
  - Participatory decision making process with members of the intervention working group. Met regularly throughout the project to develop the research agenda and study design, and to guide project implementation and evaluation. Guided by the Harlem Community and Academic Partnership principles of collaboration.
  - Preparation for protocol included 3 prior phases
    - *Enumeration*: staff conducted outreach to community members, organizations, and leaders; estimated the size of hard-to-reach populations in the target neighborhoods; and completed surveys to examine barriers to vaccination. The size of hard-to-reach populations was estimated through several methods, including venue-based and door-to-door sampling.
    - *Vaccine shortage*: Implementation was delayed due to a vaccine shortages in the fall of 2004. Outreach workers surveyed community members to assess awareness of the shortage and access to the vaccine.
    - *Pilot vaccination intervention*: A team of 4 outreach workers and 1 clinician offered vaccination door-to-door in apartment buildings over 8 weeks.
  - Rapid vaccination
    - Aimed to vaccinate 1500 individuals in 4 neighborhood areas simultaneously during 10 working days.
    - 6 weeks of outreach efforts.
      - At the neighborhood level, outreach workers distributed project informational flyers, a comic strip outlining common vaccination myths, and locations of free vaccine clinics to community residents via door-to-door and street-based venues. Materials were disseminated over the course of the project to raise awareness and visibility and to increase interest in vaccination. A project phone number was included on all materials and calls were answered during business hours.
      - At the community organization level, staff members presented information about the project at local community board meetings and CBOs. Presentations informed community members about future activities and gathered feedback on project methods and results.
    - At the individual level, nurses and physicians provided vaccination to eligible participants.
      - 4 teams of 2 nurses and 4 outreach workers offered vaccination door-to-door, at street-based venues, and at CBOs.
      - Community residents were sampled through street-based intercepts in venues selected as areas of high traffic in each neighborhood area (2 venues per neighborhood), and door-to-door assessments of a random sample of residences in each area.
      - Persons were eligible to participate if they were 18 years or older, spoke English or Spanish, and provided informed consent. In street-based intercepts, participants were first approached and asked if they would be willing to complete a survey. In door-to-door interviews, teams of interviewers approached persons at the doorway of their home and invited them to participate.
      - After participants provided verbal informed consent, outreach workers administered a brief, anonymous survey.
      - Participants were eligible to receive the vaccine following survey administration if they provided written informed consent, reported no previous adverse reactions to a vaccine, reported no allergy to eggs, had not been previously diagnosed with Guillain-Barré syndrome, were older than 19 years, had not already received the vaccine for that flu vaccine season, and were not pregnant.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Rapid vaccination protocol	6 weeks of outreach. Program: 4 teams of 2 nurses and 4 outreach workers → 33,001 promotional flyers, etc.; 5 meetings with CBOs; door-to-door visits, on-street interactions, CBO site staffing → 1648 vaccinations (775 hard-to-reach individuals).	Intervention activities tailored to neighborhoods, community organizations, and individual levels in 8 neighborhoods.	Required survey participation, written consent, and report of vaccine contraindications.	Program required estimation of size of hard-to-reach population (done by venue-based and door-to-door sampling)	Accepted by community (strongly implied)	Designed to overcome poor vaccination rates in "hard-to-reach" populations (substance abusers, possible undocumented immigrants, homeless, commercial sex workers, elderly, homebound). 60% women 72% Hispanic 68% <$9600/yr 37% members of ≥1 hard-to-reach population. Hard-to-reach were 47% of vaccinated.	CBPR approach used, including community residents, CBOs, academic institutions, local health department	Required written consent for vaccination. Required assessment of medical contraindications.

Results

Outcome	How Measured	Subgroups/Predictors	Intervention	N Analyzed	Results	Units	Comparison (adjOR)
Vaccination, n	Per research team	(Total)	Rapid vaccination protocol	NR	1648	n	
		Hard-to-reach population		1648	47% of vaccinated	%	
Vaccination, %	Per research team	Among those who opened door		NR	46	%	
Approached doors opened, %	Per research team		Rapid vaccination protocol	NR	45	%	
Interest in vaccination, %	Face-to-face survey		Rapid vaccination protocol	3079	93.5	%	Protocol vs. Pre: **2.69 (2.17, 3.33)***
			No (Pre) rapid vaccination protocol	3747	80.4	%	
% (subgroup member/not)		Hard-to-reach (Yes/No)	Rapid vaccination protocol	3079	94.0/93.2	%	Subgp Yes vs. No: 1.14 (0.84, 1.54)†
			No (Pre) rapid vaccination protocol	3747	82.1/79.4	%	**1.28 (1.04, 1.56)**†
		Prior flu vaccine (Yes/No)	Rapid vaccination protocol	3079	94.9/91.4	%	**2.37 (2.10, 2.68)**†
			No (Pre) rapid vaccination protocol	3747	84.2/72.8	%	**2.23 (1.80, 2.75)**†
		Vaccine contraindication (Yes/No)	Rapid vaccination protocol	3079	79.2/93.9	%	**0.32 (0.20, 0.51)**†
			No (Pre) rapid vaccination protocol	3747	57.5/82.4	%	**0.25 (0.21, 0.29)**†
		Vaccine medically indicated (Yes/No)	Rapid vaccination protocol	3079	93.6/93.5	%	0.99 (0.84, 1.17)†
			No (Pre) rapid vaccination protocol	3747	81.9/79.5	%	**1.21 (1.07, 1.36)**†

adjOR = adjusted odds ratio (bold font indicates statistical significance), NR = not reported.

* Adjusted for member of hard-to-reach population, ever had flu vaccine, medical contraindication for vaccination, date surveyed (implied). Individual subgroups as predictors (irrespective of intervention) not summarized here.

† Adjusted for each item in list and dates of survey (implied). Dates of survey data not summarized here.

Coady MH, et al. 2008 PMID 18511725 102_Coady-2008-Project VIVA_ a multilevel communit.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Intervention increased interest in vaccination, particularly among hard-to-reach populations in "nontraditional urban settings." Bypassing the traditional modes of health care delivery and instead offering door to door vaccination. Vaccination in door-to-door and street-based settings is a feasible means of accessing hard-to-reach populations and increasing interest in vaccination.	CBPR approach allowed team to gain access to hard-to-reach populations. Including staff with personal knowledge of project neighborhoods. Achieved higher vaccination rates of hard-to-reach populations than national estimates of the same.	Low response to door knock	Partnering with CBOs likely increased vaccination among those without regular healthcare providers or who are less likely to report to a government-sponsored clinic. During a pandemic, nontraditional settings, with CBO involvement, need to be targeted to minimize undetected infection reservoirs and bridge populations. CBPR interventions like these may hold promise in increasing vaccination rates among hard-to-reach populations	Self-report of interest in vaccination may not necessarily translate into future seeking out of vaccination. Impact was limited in duration and scope (to vaccination). Unclear how findings would generalize to other areas. (Also study design limitations due to CBPR decisions and sampling.)	Need to assess sustainability of vaccination interest and future health-seeking behaviors	Article discusses 5 phases. 4 phases related to study design and results dissemination and are not included here. Only phase 4 (rapid vaccination) is summarized in full.

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Vaccination*	Low	High[8]	High[9]	Unclear[10]	Low	Low	Unclear[11]	High[12]	High[13]	Yes[14]	**Poor**
Doors opened*	Low	High	High	Unclear	Low	Low	Unclear	High	High	Yes	**Poor**
Interest in vaccination	Low	High	High	Unclear	Low	High[15]	Unclear	High	Low	Yes	**Poor**

* No comparison between pre- and post-intervention.

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.
See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[8] Different people included pre- and post-intervention. Some surveyed may have responded multiple times (within a survey period).
[9] Different people included pre- and post-intervention. Some surveyed may have responded multiple times (within a survey period).
[10] Not reported
[11] Not reported
[12] No blinding
[13] Crude analysis only
[14] Limited (or no) *a priori* study design; ad hoc nature of outcome collection and analysis
[15] Unvalidated, unclear question (interest in vaccination). Also poor enumeration of data (numerators and denominators), particularly for vaccination rates.

Community Preparedness

Eisenman DP, et al. 2009 PMID 19944917 117_Eisenman-2009-Improving Latino Disaster Prepar.pdf
Glik DC, et al. 2014 PMID: 24399266 120_Glik et al-2014-Using the precaution adoption process.pdf

Eisenman, DP; Glik, D; Gonzalez, L; Maranon, R; Zhou, Q; Tseng, CH; Asch, SM**. 2009**. Improving Latino disaster preparedness using social networks. *American Journal of Preventive Medicine* 37(6):512-517. **PMID 19944917**
Glik, DC; Eisenman, DP; Zhou, Q; Tseng, CH; Asch SM. **2014.** Using the precaution adoption process model to describe a disaster preparedness intervention among low-income Latinos. *Health Education Research* 29(2):272-283. **PMID: 24399266**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
RCT	Programa Para Responder a Emergencias con Preparación (PREP)	US	Los Angeles County, CA	None	2007-08

Studied entities and populations

A Entities enrolled: Academic centers, CBO, DPH
- ❖ Partnership among the UCLA School of Medicine, the UCLA School of Public Health, the Coalition for Community Health (a local, nonprofit community organization dedicated to building healthy communities in underserved neighborhoods), in Los Angeles), and the Los Angeles County Department of Public Health.

B Target population: Underserved population
- ❖ Low-income Latinos
- ❖ Enrolled through community engagement and informal social networks (respondent-driven sampling)

C Deliverer/Implementer: CBO
- ❖ Programa Para Responder a Emergencias con Preparación (PREP): a community-based, participatory research study utilizing community engagement through lay health workers and social networks. Training done by *Promotoras de salud*, culturally competent lay health workers who promote health among groups that traditionally lack access to health and public health services, are bilingual, and come from the local Latino neighborhoods.

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
RCT to test a disaster preparedness program for Latino households. Hypotheses: 1. Participants in the Platica group would show greater improvement in stockpiling of disaster supplies than would participants in the Media-only group 2. Participants in the Platica group would show greater improvement in creating a family communication plan than would participants in the Media-only group.	• Stockpiling of disaster supplies • Family communication plan	2ndary paper • Stages of decision making (Glik 2014)	3 months post-intervention

Community Preparedness

Eisenman DP, et al. 2009 PMID 19944917 117_Eisenman-2009-Improving Latino Disaster Prepar.pdf
Glik DC, et al. 2014 PMID: 24399266 120_Glik et al-2014-Using the precaution adoption process.pdf

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Platica (high-intensity)	Face-to-face training and weekly discussions about disaster communication planning; also received materials; culturally adapted	1-hour training followed by 4 weekly discussion meetings	NR	Culturally and linguistically tailored training to, ultimately, improve household disaster preparedness among underserved population.	• Training, education
Media (low-intensity)	Mailers about disaster communication planning; culturally adapted	Mailings sent 3 times	NR	Comparator, lower-intensity intervention, also culturally and linguistically tailored, to provide information with ultimate goal of improving household disaster preparedness among underserved population.	• Provision of (educational) information only

N/A = not applicable, NR = not reported.

Interventions, detailed

- Platica
  - Small group discussions ("*platicas*") led by *promotoras de salud* who had received 6 hours of disaster preparedness training through courses available through the American Red Cross and by reviewing book chapters and an instructional video with the principal investigator.
  - Standardized, face-to-face, 1-hour session led by the trained *promotoras* from a manual designed for the study.
  - Also received materials and discussed and practiced carrying out individual household preparedness actions over a four week period, meeting once a week in groups.
- Media
  - Participants received a culturally-competent mailer that included a pamphlet, a laminated shopping card, and six perforated preprinted communication cards for disaster communication planning with instructions on how to fill them out.
  - Mailings were repeated twice.

Community Preparedness

Eisenman DP, et al. 2009 PMID 19944917 117_Eisenman-2009-Improving Latino Disaster Prepar.pdf
Glik DC, et al. 2014 PMID: 24399266 120_Glik et al-2014-Using the precaution adoption process.pdf

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Platica	Training and availability of *promotoras*, including 6 hours of disaster preparedness training through the American Red Cross and additional training by the principal investigator. Face-to-face 1 hour sessions. Preparation of culturally competent materials	Culturally competent education, in Spanish. Personal contact (training)	Need for face-to-face training	Requires intensive coordination, development, training of trainers, and individuals' willingness to go to training.	Acceptable to participants and community (strongly implied)	Designed for low-income Latinos, a pop	Development of materials and training: Partnership among the UCLA School of Medicine, the UCLA School of Public Health, the Coalition for Community Health (a local, nonprofit community organization dedicated to building healthy communities in underserved neighborhoods), in Los Angeles), and the Los Angeles County Department of Public Health	Exclusionary of non-Latino populations
Media	Preparation and mailing of culturally competent materials	Culturally competent educational materials, in Spanish (implied). More anonymous intervention (no training)	Responsiveness to mailings (alone)	Requires intensive coordination and development of materials.		Same	Same	Same

Community Preparedness

Eisenman DP, et al. 2009 PMID 19944917 117_Eisenman-2009-Improving Latino Disaster Prepar.pdf
Glik DC, et al. 2014 PMID: 24399266 120_Glik et al-2014-Using the precaution adoption process.pdf

Results

Outcome	How Measured	Subgroups	Intervention	Timepoint	N Analyzed	Results	Units	Comparison (P value)
Communication plan (Eisenman article)	Phone survey (Yes/No)		Platica	0 months	87	37.9	%	
				3 months	87	75.9	%	Post vs. Pre: P <0.001
			Media	0 months	100	29.0	%	
				3 months	100	52.0	%	Post vs. Pre: P <0.001
		Not prepared at baseline	Platica	3 months	54	70.4	%	**Platica vs. Media: P=0.002**
			Media		71	42.3	%	
Disaster supplies: water* (Eisenman article)	Phone survey (Yes/No)		Platicas	0 months	87	69.0	%	
				3 months	87	95.4	%	Post vs. Pre: P <0.001
			Media	0 months	100	55.0	%	
				3 months	100	80.0	%	Post vs. Pre: P <0.001
		Not prepared at baseline	Platica	3 months	27	98.3	%	**Platica vs. Media: P=0.003**
			Media		45	66.7	%	
Disaster supplies: food* (Eisenman article)	Phone survey (Yes/No)		Platica	0 months	87	72.4	%	
				3 months	87	95.4	%	Post vs. Pre: P <0.001
			Media	0 months	100	67.0	%	
				3 months	100	80.0	%	Post vs. Pre: P = 0.0124
		Not prepared at baseline	Platica	3 months	24	91.7	%	**Platica vs. Media: P=0.013**
			Media		33	60.6	%	

continued

Results, continued

Outcome	How Measured	Subgroups	Intervention	Timepoint	N Analyzed	Results	Units	Comparison (P value)
Family communication plan stage Stages 1-4: No plan Stage 7: Have a plan† (Glik article)	Phone survey		Platica group	0 months	87	1-4: 67.8 7: 19.5	% %	**Overall (net): adj P 0.003 (favoring Platica)**
				3 months	87	1-4: 4.6 7: 78.2	% %	
			Media group	0 months	100	1-4: 64.0 7: 21.0	% %	
				3 months	100	1-4: 22.0 7: 47.0	% %	
Disaster kit stage Stages 1-4: No kit Stage 7: Have a kit† (Glik article)	Phone survey		Platica group	0 months	87	1-4: 23.0 7: 29.9	% %	Overall (net): adj P 0.943
				3 months	87	1-4: 1.1 7: 58.6	% %	
			Media group	0 months	100	1-4: 28.0 7: 32.0	% %	
				3 months	100	1-4: 3.0 7: 50.0	% %	

* Also reported data on radio, battery, first-aid kit, flashlight, extra batteries, documents, prescribed medicine, pet food, cash, blanket, and rain gear, all statistically nonsignificant between interventions, except blanket (P=0.047, favoring Platica).

† Stages 5 (decided but not yet acted) and 6 (acting, but not maintaining the behavior) are not included here, but have been reported in Glik article.

Community Preparedness

Eisenman DP, et al. 2009 PMID 19944917 117_Eisenman-2009-Improving Latino Disaster Prepar.pdf
Glik DC, et al. 2014 PMID: 24399266 120_Glik et al-2014-Using the precaution adoption process.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
An intervention delivered through a culturally targeted program using community engagement and informal social networks significantly increased disaster preparedness (and stages of preparedness) in a difficult-to-reach population. Platica more effective than media, although both were effective.	*Promotoras* proved effective. Small-group interactive approach offered by the *promotoras* is believed to have helped participants to develop specific plans. *Promotoras* may provide needed assistance in clarifying uncertainties and misunderstandings. Respondent-driven sampling allowed inclusion of populations who are often not well-represented. The informal social networks also may have made participants more likely to respond to the intervention.	No items reported	More intensive, personal interventions are more effective, but even information alone (mailings) are effective. More complex behavior change, such as making a communication plan, requires more intensive education, whereas messages about supplies are simpler to comprehend and enact. Benefit to using Precaution Adoption Process Model stages as a research outcome. Clear, consistent messages delivered through a CBO led to increased preparedness in a low-resource community. Utility of working with trusted CBOs. Progress in increasing disaster preparedness is contingent on more focused community-based outreach (than mass media campaigns).	Study relied on self-selected participants, self-reported data, and provided financial incentives. Possible social desirability bias. Small sample size precluded more sophisticated analyses. Respondent-driven sampling may have made sample more homogeneous and less generalizable.	Develop and test scalable versions of PREP	

Community Preparedness

Eisenman DP, et al. 2009 PMID 19944917 117_Eisenman-2009-Improving Latino Disaster Prepar.pdf

Glik DC, et al. 2014 PMID: 24399266 120_Glik et al-2014-Using the precaution adoption process.pdf

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Communication plan	Low	Low	Low	Low	Low	High[16]	Low	Low	Low	Yes[17]	**Moderate**
Disaster supplies	Low	Low	Low	Low	Low	High	Low	Low	Low	Yes	**Moderate**
Family communication stage	Low	Low	Low	Low	Low	High	Low	Low	Low	Yes	**Moderate**
Disaster kit stage	Low	Low	Low	Low	Low	High	Low	Low	Low	Yes	**Moderate**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[16] Unvalidated, self-reported outcomes. Per article, possible social desirability bias (positive answers given to satisfy the researchers).

[17] Respondent-driven sampling may have made sample more homogeneous and less generalizable.

Montgomery County Department of Health and Human Services. 2008. *Emergency preparedness education for the Latino community conducted by health promoters: A mini pilot project*. www.cidrap.umn.edu.

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Pre-post, prospective	Vías	US	Montgomery County, MD	None	2007

Studied entities and populations

A **Entities enrolled (as trainers)**: Volunteer lay health promoters
- ❖ Latino community members who share the characteristics of the population they are trying to reach.
- ❖ Natives of Central and South America, Spanish speaking, live in County areas densely populated by Latinos, work in child care, food services, housekeeping, construction (the same services where the immigrant population is disproportionately represented)

B **Target population**: Latino community
- ❖ Particularly low-income Latinos

C **Deliverer/Implementer**: CBO, DHS, Academic
- ❖ Latin Health Initiative (LHI) and its health promoter program Vías de la Salud (Pathways to Health, also known as Vías)
  - Charged with developing, implementing and evaluating a plan of action that is responsive to the needs of Latinos in the County
  - Involve and empower different segments of the Latino community to realize and use their cultural traditions as strengths in finding solutions to the community's problems
  - Staff members from the County Department of Health and Human Services and a Steering Committee of volunteer professionals, who represent national, state, and local organizations dealing with Latino health
- ❖ Advanced Practice Center (APC) for Public Health Emergency Preparedness of the Montgomery County Department of Health and Human Services (DHHS)
  - One of 8 APCs in the US.
  - A resource in emergency response capabilities for local public health agencies, especially those who are also planning on a multi-jurisdictional area
  - Collect appropriate tools that other local public health agencies in the National Capital Region have developed for dissemination
  - Create and develop toolkits, technologies, and other materials that have been evaluated and tested in Montgomery County, into formats that can be easily replicated and used by other local public health agencies.
  - Mandate to develop unique tools, technologies, exercises, and educational materials to communicate more accurately and effectively with vulnerable populations and to improve emergency preparedness and response
- ❖ University of Maryland School of Medicine

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Assessing the effects of the intervention (Vías) on participants' attitudes and practices regarding emergency preparedness and on the effectiveness of the promoter training.	Not stated • Questionnaire responses	(none)	Promoters: Before and immediately after completion of intervention (training) Community members: Before, after 2nd session, and after 3rd (final session)

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Vías	Training of 6 experienced health promoters to conduct group educational sessions with Latino residents. Subsequent pilot community education sessions.	Training: 12 hours classroom time, Practice sessions Education sessions: 3 sessions, 1 or 2 hours each.	Training: NR Education sessions: Local elementary school, Mixed-income rental property (owned by nonprofit). Both sites had large Latino populations. Both sites are long-term collaborators with the Vías program.	Low-income Latinos have poor knowledge base about public emergency knowledge, perceptions of risks, emergency preparedness, or have emergency plans. Need to increase knowledge. Community members (lay health promoters) could be trained to deliver information	• Education / training

Intervention, detailed

- Training of lay health promoters
  - Curriculum used to train 6 experienced health promoters of the Vías program to conduct group educational sessions with Latino residents
  - 12 hours classroom time and applied practice by the group of promoters
  - A comprehensive community program to promote healthy behaviors and increase access to health care among low-income Latinos
  - Draws on evidence and best practices from the literature documenting the effectiveness of the health promoter model in health promotion and disease prevention.
- Community education sessions
  - Teams of three Vías promoters conducted two pilot interventions in neighborhoods with a high concentration of Latinos
  - 3 educational sessions. Typically the first session addressed the topics of "what is an emergency" and steps one and two of emergency preparedness: 1) initiate a conversation about emergencies; and 2) develop a family emergency plan. The second session reviewed the themes of the first session, and introduced step 3) prepare an emergency supply kit of nine essential items. The third session summarized and reinforced the content of the first two sessions.
  - Also included standard practices for all Vías programs: on-site child care; healthy snacks for participants and their children; and incentives for participants. In this pilot project, including items related to emergency preparedness—flashlights and batteries, first aid kits, medication dispensers, and travel toothbrushes—as well as t-shirts with the slogan in Spanish "My family is prepared. And yours?" and more substantial items that were raffled off (among those who had brought their emergency plan at one site, and among those who had attended all three sessions at the second site), including jackets and small, wheeled carrying cases. (The "more substantial items" were unique to this project).

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Vías	Annual budget: $43,216 Includes promoter coordinators, coordinator assistant, incentives, training sessions, babysitters, food, miscellaneous (Table 7)	Of the Latino community	Communities without experienced, enthusiastic promoters, or where promoters do not have communities' trust may not be able to replicate the success.	The overall training and courses are readily replicated in Latino communities	Well-accepted. Community was enthusiastic and responsive.	Aimed at Latino community, particularly low-income Participants: 87% female (100% at elementary school), 97% Latino (3% Thai)	Well-integrated CBO, DHS, and incidentally academic center	No issues discussed

Results

Outcome	How Measured	N Analyzed	Timepoint	Results	Units	Comparison
Promoter knowledge: Emergency plan, correct[18]	Test	6	Pre-training	67	%	NR
		6	Post-training	100		
		5*	Post-intervention	100		
Promoter knowledge: Emergency shelters, correct[19]	Test	6	Pre-training	50	%	NR
		6	Post-training	100		
		5*	Post-intervention	100		
Promoter knowledge: Evacuation, correct[20]	Test	6	Pre-training	17	%	NR
		6	Post-training	100		
		5*	Post-intervention	40		
Promoter knowledge: Emergency preparation, correct[21]	Test	6	Pre-training	0	%	NR
		6	Post-training	83		
		5*	Post-intervention	80		
Promoter knowledge: Emergency supply kit, Rx, correct[22]	Test	6	Pre-training	17	%	NR
		6	Post-training	100		
		5*	Post-intervention	100		
Promoter knowledge: Emergency supply kit, candles, correct[23]	Test	6	Pre-training	33	%	NR
		6	Post-training	100		
		5*	Post-intervention	100		
Promoter knowledge: Emergency supply kit, can opener, correct[24]	Test	6	Pre-training	83	%	NR
		6	Post-training	100		
		5*	Post-intervention	100		

continued

[18] An emergency plan should include a contact person who does not live in Maryland, Virginia or DC (True).
[19] Emergency shelters accept pets (False).
[20] In the event of any emergency, the best thing to do is to evacuate from the area. (False)
[21] The first step in preparing for an emergency is making an emergency supplies kit. (False)
[22] The following are among the 9 essential items in an emergency supplies kit: Prescription medications (True)
[23] The following are among the 9 essential items in an emergency supplies kit: Candles and matches (False)
[24] The following are among the 9 essential items in an emergency supplies kit: Manual can opener (True)

Outcome	How Measured	N Analyzed	Timepoint	Results	Units	Comparison
Participant feelings about family's preparedness for an emergency, "Feel prepared" / "More or less prepared"	Questionnaire	39	Pre-course	8/49	%	NR
		37	Post-Session 2	43/46		
		29	Post-Session 3	69/24		
Participant self-reported emergency preparedness practices: Have talked	Questionnaire	39	Pre-course	33	%	NR
		37	Post-Session 2	81		
		29	Post-Session 3	100		
Participant self-reported emergency preparedness practices: Have plan	Questionnaire	39	Pre-course	23	%	NR
		37	Post-Session 2	65		
		29	Post-Session 3	100		
Participant self-reported emergency preparedness practices: Have water	Questionnaire	39	Pre-course	10	%	NR
		37	Post-Session 2	62		
		29	Post-Session 3	97		
Participant self-reported emergency preparedness practices: Have food	Questionnaire	39	Pre-course	21	%	NR
		37	Post-Session 2	70		
		29	Post-Session 3	93		
Participant self-reported emergency preparedness practices: Have other	Questionnaire	39	Pre-course	28	%	NR
		37	Post-Session 2	70		
		29	Post-Session 3	90		

Participant knowledge of children's schools' emergency plans, yes (excluding those without children)	Questionnaire	28	Pre-course	43	%	NR
		33	Post-Session 2	43		
		25	Post-Session 3	92		

* By design, only 5 of 6 promoters participated in community education sessions (intervention).

There are also data on the Promoters' emergency preparedness attitudes and practices (Table 6 in article); whether participants have specific items prepared (Table 4); and qualitative pre-course data on what participants would like to learn about emergency preparedness (text and Table 3), post-course doubts they still had (text), comments about course (text), promoters' evaluations of participants' reactions to the sessions (text), and promotors' suggestions to improve the course (text).

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Promoter-led community education sessions on emergency preparedness are remarkably effective in increasing the Latino community's readiness for emergencies. Promoters' knowledge of emergency preparedness declined after the intervention as compared to after the training on two items, most notably on the question about the need to evacuate in the event of any emergency. Although the facilitators/coordinators did not observe the promoters telling community participants to evacuate in all emergency situations, this highlights the need for ongoing supportive supervision and reinforcement of knowledge.	A carefully designed, culturally and linguistically appropriate intervention, based on audience research and the lessons learned from years of experience of the Vías program. Use of a limited number of messages to help the promoters master basic concepts and to help the community understand key actions to undertake. Collaboration with trusted community agencies that serve Latinos. The provision of incentives, although no participant mentioned these in the post intervention questionnaires, and the promoters said that "incentives are not the priority for the community." Ongoing supportive supervision and regular meetings with the promoters.	Not discussed	To be most effective requires enthusiastic, skilled, talented, creative promoters who are closely integrated into the community [although the study did not test whether this was, in fact, the case]	Not discussed	Not discussed	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Promoter knowledge	Low	None (pre-post)	Low	Unclear[25]	Low	High[26]	Low	High[27]	Low	No	**Moderate**
Participant feelings about preparedness	Low	None	Low	Unclear	Low	High	Low	High	Low	No	**Moderate**
Participant self-reported emergency preparedness practices	Low	None	Low	Unclear	Low	High	Low	High	Low	No	**Moderate**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[25] Not reported
[26] Unvalidated, self-reported outcomes
[27] No blinding

Eisenman DP; Bazzano, A; Koniak-Griffin, D; Tseng, CH; Lewis, MA; Lamb, K; Lehrer D. **2014.** Peer-mentored preparedness (pm-prep): A new disaster preparedness program for adults living independently in the community. *Intellectual and developmental disabilities* 52(1):49-59. **PMID 24635691**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
RCT	Peer Mentored Prep (PM-Prep)	US	Los Angeles County, CA	Hypothetical (earthquake)	2007-08

Studied entities and populations

A Entities enrolled: Eligible individuals
- ❖ Adults who have intellectual and developmental disabilities (IDD), living with family or independently with supported services in the community; English-speaking; client of a specific center that provides care coordination, health education, and resources.

B Target population: Underserved population
- ❖ Adults who have IDD who live independently in the community (including with family; not group home or nursing facility)

C Deliverer/Implementer: Academic researchers, Community Center staff
- ❖ Peer mentors as co-teachers: adult clients of the regional center who completed extensive training to learn about emergency preparedness, peer mentoring, leadership, and motivational strategies.
- ❖ Health educator

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Determine whether disaster preparedness knowledge and behaviors increased 1 month after completion of the intervention among the adults who participated in the experimental intervention compared to waitlist controls and the degree to which knowledge and behaviors increased. Hypothesized that adults in the experimental group would report significantly increased disaster preparedness knowledge and behaviors 1 month after completion of the intervention compared to adults in the wait-list control group.	• Correct answers on the earthquake preparedness questionnaire (In Methods phrased as "Proportion of disaster preparedness supplies obtained") • Correct answers on the earthquake safety knowledge questionnaire	(none)	1 month after training (or study entry)

Community Preparedness

Eisenman DP, et al. 2014 PMID 24635691 116_Eisenman et al-2014-Peer mentored preparedness.pdf

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
PM-Prep	Peer mentored emergency preparedness training	4 classes, 2 hours each, held twice a week for 2 weeks	Community Center (Westside Regional Center)	Independently-living adults with IDD becoming more common, thus have need to organize their own emergency preparations. Few materials address disaster preparedness for this population. Social environmental features such as social supports and "lay" or peer mentors can improve participation in health promotion programs.	• Training / education
Waitlist	Same intervention delayed 1 month	None (during trial)	Same	Control group	• None (during trial)

Intervention, detailed

- PM-Prep
  - Developed, fielded, and tested in a community-based, participatory research program. Developed collaboratively among the academic researchers, Community Center staff members, Community Center clients with developmental disabilities, and the Center's consumer advisory board.
  - Goal was to provide to adults with IDD living independently knowledge, skills, and tools to be safe, self-reliant, and able to communicate with family and other social supports in the event of a disaster. Participants would have (1) personal emergency plans, (2) portable and home emergency supply kits, and (3) knowledge to protect themselves from hazards in a disaster.
  - Peer mentors were co-teachers (as described above, under *Deliverer/Implementers*). Mentors ensured that all class participants actively participated in the class activities and led small-group exercises, facilitated class activities, assisted the participants during hands-on learning activities, performed in-class demonstrations, and served as role models, providing support, motivation, and encouragement.
  - Core of the program is a manualized training for the peer mentors and a series of four classes for the students.
  - Each class had a theme: (1) earthquake, fire, and related home hazard safety; (2) home emergency supplies; (3) personal disaster planning, including evacuation plans and communication in an emergency; (4) review followed by an earthquake scenario exercise that allowed discussion and skills practice.
  - Classes were designed specifically for adults with IDD. Details of such, and examples are in article.
- Waitlist
  - Intervention delayed by 1 month to act as comparison group.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
PM-Prep	Training of mentors. Health educator and mentors running 8 hours of classes.	Involved Center's staff and clients to design the intervention (with their values and preferences)	None described	Dependent on availability and interest of Center, staff, and clientele.	Acceptable to participants and staff (strongly implied)	Focuses on a potentially underserved community.	Health educator, Center staff and administration, Center clientele	No issues described.

Results

Outcome	Definition	How Measured	Intervention	Timepoint	N Analyzed	Results	Units	P Value
Earthquake knowledge score	Correct answers on the earthquake knowledge safety questionnaire (7-items)	Questionnaire	PM-Prep	0 months	≤42	79 (33, 100)	%, Mean (min, max)	PMP vs. Control: P (net chg) = 0.052
				1 months		87 (50, 100)		Post vs. Pre: P = 0.001
			Waitlist	0 months	≤40	74 (38, 100)		
				1 months		75 (38, 100)		Post vs. Pre: P = 0.74
Earthquake preparedness score	Correct answers on the earthquake preparedness questionnaire (17-items)	Questionnaire	PM-Prep	0 months	≤42	56 (6, 94)	%, Mean (min, max)	PMP vs. Control: P (net chg) = 0.0003
				1 months		75 (0, 100)		Post vs. Pre: P <0.0001
			Waitlist	0 months	≤40	49 (17, 89)		
				1 months		54 (6, 94)		Post vs. Pre: P = 0.01

Interactions:

- Participants who reported an Independent Living Services or Supportive Living Services worker as their primary source of support increased knowledge, but not preparedness, more with PM-Prep compared with control than participants who reported a family member or friend as their primary source of support.

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
PM-Prep significantly increased disaster preparedness in this at-risk population (independently living adults with IDD). Individuals who identified a social worker as their primary support had greater increases in knowledge with PM-Prep than those with family or friends as their primary support.	Working within participants' in-place social networks. Possibly, social workers who accompanied participants in classes reinforced knowledge.	Nothing reported	Possible to utilize a community-based approach to teach disaster preparedness to adults with IDD (for short-term outcomes) A manualized version allows for replication.	Social workers may have provided knowledge to those on waitlist (these participants had increased knowledge without course). This bias would further favor effectiveness of PM-Prep. Possible selection bias: those more motivated to participate may be more motivated to adopt disaster preparedness. Small sample size (pilot study). Validated measures of disaster preparedness are not available for adults with IDD. Possible social desirability bias. Did not study the independent effect of peer mentors	Need to replicate the results in a large trial with longer follow-up.	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Knowledge score	Low	Unclear[28]	High[29]	Unclear[30]	Low	High[31]	Low	Low	Low	Yes[32]	**Moderate**
Preparedness score	Low	Unclear	High	Unclear	Low	High	Low	Low	Low	Yes	**Moderate**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[28] Not reported
[29] Control group contaminated (although this bias would push toward null).
[30] Not reported
[31] Not validated for adults with disabilities population
[32] Possible confounding effect of peer mentors not accounted for.

Community Preparedness

Hites LS, et al. 2012 PMID 21240557 59_Hites-2012-Emergency preparedness training of.pdf

Hites, LS; Granillo, BS; Garrison, ER; Cimetta, AD; Serafin, VJ; Renger, RF; Wakelee, JF; Burgess JL**. 2012**. Emergency preparedness training of tribal community health representatives. *Journal of Immigrant & Minority Health* 14(2):323-329. **PMID 21240557**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Pre-post, prospective	Basic Certificate in Public Health Preparedness (BCPHP)	US	Navajo Nation, AZ	Simulation: Tanker truck spills	2012*

* Manuscript submission date.

Studied entities and populations

A **Entities enrolled**: CHWs
- ❖ Community Health Representatives on Tribal lands

B **Target population**: American Indians
- ❖ Navajo Nation (on tribal lands)

C **Deliverer/Implementer**: State agency, Academic Center
- ❖ Arizona Center for Public Health Preparedness
- ❖ Diné College of the Navajo Nation (Tribal College with Community Health Representative curriculum.

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Effectiveness of a pedagogical approach applied to a training program for Community Health Representatives in the Navajo Nation.	Implicitly • Core competencies (by testing)	(none)	Pre- and Post-training (exact timing not reported)

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
BCPHP	3 online activities designed to provide awareness and advanced knowledge to create a heightened level of preparedness. Adapted for American Indian learning preferences.	20 modules requiring 25-35 hours, with a video seminar series of presentations. 4 month total span	Classroom delivery and workshops. Group viewing of seminars and online materials. At 4 locations across Navajo Nation with internet access.	To train CHWs in a subset of the Bioterrorism PHEP Competencies, with cultural adaptation.	• Training / education

Intervention, detailed

- Basic Certificate in Public Health Preparedness (BCPHP)
  - Training in a core set of bioterrorism Public Health Emergency Preparedness (PHEP) competencies developed by the CDC and Columbia University College of Nursing.
    - Original training consists of 3 online activities: (1) an introduction to the course, (2) a preparedness in the Southwest course, and (3) the Arizona Public Health Preparedness Seminar series. 20 modules that can be completed in about 25-35 hours interspersed with a video seminar series of presentations by PHEP experts. Online course includes validation steps to ensure competencies are "linked".
  - Based on an e-learning format packaged in an awareness-level emergency preparedness certificate program. Arizona Center for Public Health Preparedness partnered with Diné College to adapt for tribal use.
  - Adapted to better meet the learning preferences of American Indians, including global processing, visual/perceptual instruction, sufficient time to allow for reflection and discussion, and cooperation and group work and discussion.
    - Printed handouts of content, face-to-face classroom delivery. Workshops facilitated by Diné College faculty. Each workshop composed of previously acquainted Community Health Representative (participant) peer groups. Group format viewings of online seminars, online review of the course modules, and group discussions of Navajo-specific case studies.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
BCPHP	Cultural adaptation. Large time commitment by trainers and trainees. Required American Indian educators of American Indians.	Culturally adapted to American Indian learning preferences. Cultural differences can hamper the effectiveness of traditional training.	Required release time from work to participate in training during working hours.	No issues discussed	Acceptable and desirable in community	Makes training accessible to underserved American Indian population	State public health entity and academic center (or equivalent). Course set up to provide workforce development educational services (12 credits)	No issues discussed

Results

Outcome	Definition	How Measured	Timing	N Analyzed	Results	Metric	Comparison (P value)
Bioterrorism competency 1, questions correct	"Describe the public health role in emergency response in a range of emergencies that might arise."	Online test	Pre-training	83	2 (of 7 questions)	Median	Post vs. Pre: P = 0.0002
			Post-training	83	3		
Bioterrorism competency 2, questions correct	"Describe the chain of command in emergency response"	Online test	Pre-training	83	1 (of 4 questions)	Median	Post vs. Pre: P = 0.009
			Post-training	83	2		
Bioterrorism competency 4, questions correct	"Describe his/her functional role(s) in emergency response and demonstrate his/her role(s) in regular drills"	Online test	Pre-training	83	3 (of 8 questions)	Median	Post vs. Pre: P <0.0001
		Online test	Post-training	83	5		
Bioterrorism competency 5, questions correct	"Demonstrate correct use of all communication equipment used for emergency communication (phone, fax, radio, etc.)"	Online test	Pre-training	83	0 (of 1 question)	Median	Post vs. Pre: P = 0.41
			Post-training	83	0		
Bioterrorism competency 6, questions correct	"Describe communication role(s) in emergency response (within agency, media, general public, personal)"	Online test	Pre-training	83	0 (of 2 questions)	Median	Post vs. Pre: P <0.0001
			Post-training	83	1		
Bioterrorism competency 8, questions correct	"Recognize deviations from the norm that might indicate an emergency and describe appropriate action"	Online test	Pre-training	83	0 (of 1 question)	Median	Post vs. Pre: P <0.0001
			Post-training	83	1		

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Completion of the adapted BCPHP led to improvements in the PHEP competency of the Navajo Nation CHRs for 5 of the 6 bioterrorism Core Competencies.	Hybrid format of e-learning and traditional face-to-face classroom presentation effective for American Indian learners. Likely due to: (1) familiar environment; (2) sessions conducted by well-known, local faculty; (3) students in each class were peers known to each other; (4) classes were noncompetitive and collaborative; (5) Evaluation conducted online, thus confidentially; (6) training and case histories were constructed around real-life social, cultural, political and geographic conditions of the Navajo Nation, thus immediately engaging.	None reported	Supports the contention that tribe-specific adaptations made to training curricula and delivery is an effective means of ensuring course content is relevant to American Indian audiences.	No comparison with non-adapted version (among Native Americans or non-Native Americans). Did not assess competency in actual public health emergencies. Scores on most competencies remained low post-training.	Supplement training with drills and exercises.	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Bioterrorism competencies (various)	Low	None (pre-post)	Low	Unclear[33]	Low	High[34]	Low	High[35]	Low	No	**Moderate**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[33] Not reported
[34] Unvalidated
[35] Unblinded

Community Preparedness

Williams MV, et al. 2018	PMID 29584681	127_Williams et al_2018_Evaluating Community Partnerships.pdf
Bromley E, et al. 2017	PMID 29065491	112_Bromley et al-2017-How do communities.pdf
Chandra A, et al. 2015	PMID 26279093	25_Chandra et al-2015-Developing a tabletop exercise.pdf

Williams, MV; Chandra, A; Spears, A; Varda, D; Wells, KB; Plough, AL; Eisenman DP. **2018**. Evaluating Community Partnerships Addressing Community Resilience in Los Angeles, California. *Int J Environ Res Public Health* 15(4): 610. **PMID 29584681**
Bromley, E; Eisenman, DP; Magana, A; Williams, M; Kim, B; McCreary, M; Chandra, A; Wells, KB. **2017**. How Do Communities Use a Participatory Public Health Approach to Build Resilience? The Los Angeles County Community Disaster Resilience Project. *Int J Environ Res Public Health* 14(10): 1267. **PMID 29065491**
Chandra, A; Williams, MV; Lopez, C; Tang, J; Eisenman, D; Magana, A. Developing a Tabletop Exercise to Test Community Resilience: Lessons from the Los Angeles County Community Disaster Resilience Project. *Disaster Med Public Health Prep* 9(5):484-8. **PMID 26279093**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
RCT	Los Angeles Community Disaster Resilience project (LACCDR)	US	Los Angeles, CA	None	2013-2014, and ongoing

Studied entities and populations

A **Entities enrolled**: Coalitions within 16 communities
- ❖ Existing community coalitions across geologically and density (urban/rural) diverse communities.
  - ▪ Communities had to have a shared identity as a community, each with <50,000 residents (although one had >100,000 residents) and had to have a sufficient basic infrastructure for developing a collaborative, including having a mix of stable community-based organizations and government institutions such as schools, police/fire departments, local businesses, and neighborhood councils.
- ❖ 105 members from the "preparedness coalitions" and 98 members from the "resilience coalitions" (total N =203). On average 7-10 people per coalition.

B **Target population**: Communities
- ❖ As per *Entities enrolled*.

C **Deliverer/Implementer**: Researchers, Coalitions, Public Health Nurse (for "resilience" coalitions) or Community Health Educator (for "preparedness" coalitions).
- ❖ Research team (as facilitator).
- ❖ Exercises meant to be self-guiding.

Community Preparedness

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Research Questions / Aims	**Primary Outcomes**	**Secondary Outcomes**	**Evaluation/Analysis Timing vs. Implementation**
Williams 2018 • How do coalitions of community partners, engaged in building community resilience for disasters as an approach to preparedness, develop and expand over time? • What is the quality of these community partnerships, and how do they change over the course of time? • What strategies do these coalitions use to achieve specific disaster resilience outcomes? • How do coalitions differ in their partnership structure and strategies over time, as a function of intervention support from LHDs (for either implementing more traditional, expert-driven preparedness activities, or for an intentional, community resilience approach using community engagement as a lever for partnership development)? Bromley 2017 • Describe community coalition members' understanding of the community resilience concept and operationalization of its components. • Detail community-based activities chosen by coalition members to build resilience. Chandra 2015 • Describe key themes from the pilot testing of the tabletop in the context of resilience	Implicitly (Williams 2018) • Number, type, and quality of relationships among organizations ❖ Trust among partners ❖ Perceived value of partners ❖ Density/Number of connections ❖ Activity coordination ❖ Hours spent on coalition activities ❖ Size of coalitions Implicitly (Bromley 2017) • Activities ❖ Fair ❖ Event ❖ Outreach ❖ Training Implicitly (Chandra 2015) • Self-scores from Tabletop Exercise regarding ❖ Partnership ❖ Engagement ❖ Education ❖ Self-sufficiency	(None additional)	Williams 2008: Start of coalitions (May 2013) and 1 year later (June 2014) Bromley 2017: Approximately 1 to 2 years into coalitions (2014 through 2015) Chandra 2015: Approximately 1 year into coalitions (summer 2014)

Community Preparedness

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Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Resilience Coalitions	8 Coalitions focused on increasing community resilience	No information	No information	Community resilience as an organizing frame for engagement activities has great potential to integrate health promotion activities in communities and provide improved approaches for partnership development.	• Behavioral (community organization)
Enhanced Preparedness Coalitions	8 Coalitions focused on enhancing preparedness	No information	No information	Study comparison arm, using an "enhanced standard preparedness framework"	• Behavioral (community organization)
Tabletop exercises	8 Coalitions implement tabletop exercises of escalating events	2 hours (1.5 hour scenario; 30 minute debriefing)	No information	Tabletop exercises, long used by community health facilities to prepare for specific disasters, may have potential for application in the context of community resilience. Designed to map to 4 (of 8) "resilience levers": (1) Partnership (developing strong partnerships within and between government and nongovernmental organizations), (2) Engagement (promoting participatory decision making in planning, response, and recovery activities), (3) Education (ensuring ongoing information to the public about preparedness, risks, and resources before, during, and after a disaster), and (4) Self-Sufficiency (enabling and supporting individuals and communities to assume responsibility for their preparedness).	• Training / education

Intervention, detailed

- Resilience Coalitions
  - Community based coalitions (CBOs) developed to build "community resilience capability in four levers of [resilience]—community self-sufficiency; integrated partnerships among government and nongovernmental organizations; engagement of at-risk populations in resilience planning; and education of all populations about preparedness, response, and recovery."
  - On average 10 "stakeholders" from "existing coalitions". Not further described.
  - Had access to a public health nurse to increase awareness of community resilience issues, build relationships among community leaders and other stakeholders, and to enhance the resources of community organizations to contribute to building resilience. Used a community resilience toolkit which addressed topics such as leadership development, asset mapping and social preparedness, community engagement processes, psychological first aid, developing field workers, and vulnerability assessment.
  - Received explicit training on community resilience definitions and activities which included broadening the membership of the coalition to include a variety of partners, based on CDC guidance on the 11 essential community sectors with which partnerships can improve population health, resilience, and extend the

reach of public health.
    - Resilience communities were asked to grow their coalitions and reach larger numbers of sectors and organizations in the community to represent the various interests of a more diverse set of stakeholders, while building a content focus on disaster preparedness as a collaborative.
- Preparedness Coalitions
    - On average 7 "stakeholders" from "existing coalitions". Not further described.
    - Had access to a community health educator who helped facilitate a standardized, organized form of public health preparedness practice focused mainly on improving household level preparedness with supplies and emergency plans.
    - Trained on traditional preparedness, special populations, and strategies for linking with community groups.
    - Not formally trained in community resilience concepts and did not have access to the community resilience toolkit though they were exposed to some general aspects of the community resilience concept at annual overall project convenings.
- Tabletop exercises (administered to both Resilience and Preparedness coalitions)
    - A scenario that is seemingly modest at start (a heat wave) but then escalates over time with other changes in community conditions (crime increases, drought worsens, brownouts occur, and community members die). Scenario elements and sample questions at each stage of the scenario are provided in Table 1 of Chandra 2015 article.
    - Scenario questions designed to map to 4 resilience levers: Partnership, Engagement, Education, and Self-Sufficiency (see *Rationale*, above).
    - Designed to help the communities identify any gaps in assets and partnerships that may be less relevant in much less severe conditions but that would be critical for mitigating the overall negative impact.
    - Conducted after the coalitions had completed initial action plans, had received training in all the core components of either standard preparedness or community resilience, and had just started to implement community programs or were planning to under their action plans.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Resilience Coalitions	Finding and organizing CBOs (no explicit information). Also see *Results* (hr/mo)	CBOs, implicitly communities apply their own values / preferences	None reported	Not discussed. Successfully created coalitions.	Not discussed.	Outreach activities to vulnerable populations	Researchers (or implementer) must find and organize, and collaborate with existing CBOs	Not discussed
Preparedness Coalitions	Finding and organizing CBOs (no explicit information). Also see *Results* (hr/mo)	CBOs, implicitly communities apply their own values / preferences	None reported	Not discussed. Successfully created coalitions.	Not discussed.	Outreach activities to vulnerable populations	Researchers (or implementer) must find and organize, and collaborate with existing CBOs	Not discussed

Community Preparedness

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Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Tabletop exercise (administered to both coalitions	Designing and administering exercises (no explicit information). 2 hours of CBO members' time. Research personnel time	Coalitions run the exercises and apply their own values / preferences as part of the exercise.	None reported	Not discussed. Successfully ran exercises.	Not discussed.	Tabletop revealed lack of preparedness / inclusion of at-risk populations and communities	None: Exercises are self-run (in theory)	Not discussed

Results, Quantitative

Outcome	How Measured	Arm	N (Communities) Analyzed	Timing	Results	Metric	Difference
Size: Organizations/coalition (Williams 2018)	Online survey	Resilience coalitions	8	Start of coalition	10	n, mean	RC vs. PC: P = 0.12
				1 year	15		RC vs. PC: P = 0.06
		Preparedness coalitions	8	Start of coalition	7		
				1 year	8		
Size: Sectors[A]/coalition (Williams 2018)	Online survey	Resilience coalitions	8	Start of coalition	6	n, mean	**RC vs. PC: P = 0.03**
				1 year	7		**RC vs. PC: P <0.0001**
		Preparedness coalitions	8	Start of coalition	4		
				1 year	4		
Time: Hours/month spent on coalition activities (Williams 2018)	Online survey	Resilience coalitions	8	Start of coalition	12.56	hr, mean	RC vs. PC: P = 0.92
				1 year	27.79		RC vs. PC: P = 0.73
		Preparedness coalitions	8	Start of coalition	13.4		
				1 year	31.56		

Community Preparedness

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Outcome	How Measured	Arm	N (Communities) Analyzed	Timing	Results	Metric	Difference
Trust among coalition members[B] (Williams 2018)	Online survey—Scale: 1-4 (most)[B]	Resilience coalitions	8	Start of coalition	2.91	mean	**RC vs. PC: P <0.01**
				1 year	3.24		RC vs. PC: P = 0.50
		Preparedness coalitions	8	Start of coalition	3.43		
				1 year	3.37		
Value of partners to the mission[B] (Williams 2018)	Online survey—Scale: 1-4 (most)[B]	Resilience coalitions	8	Start of coalition	2.97	mean	RC vs. PC: P = 0.37
				1 year	2.88		RC vs. PC: P = 0.52
		Preparedness coalitions	8	Start of coalition	3.20		
				1 year	3.05		
Density (No. of connections)[B] (Williams 2018)	Online survey—Scale: 1-4 (most)[B]	Resilience coalitions	8	Start of coalition	0.72	mean	**RC vs. PC: P = 0.04**
				1 year	0.60		RC vs. PC: P = 0.14
		Preparedness coalitions	8	Start of coalition	0.54		
				1 year	0.75		
Activity type: Process (Williams 2018) [Partners engage *only* in simple ways such as attending meetings together]	Online survey	Resilience coalitions	8	Start of coalition	23.7	%	NR
				1 year	19.2		
		Preparedness coalitions	8	Start of coalition	34.3		
				1 year	18.7		
Activity type: Cooperative (Williams 2018) [Process *and* partners share information about their own activities]	Online survey	Resilience coalitions	8	Start of coalition	39.2	%	NR
				1 year	44.9		
		Preparedness coalitions	8	Start of coalition	29.3		
				1 year	36.7		

Community Preparedness

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Chandra A, et al. 2015 PMID 26279093 25_Chandra et al-2015-Developing a tabletop exercise.pdf

Outcome	How Measured	Arm	N (Communities) Analyzed	Timing	Results	Metric	Difference
Activity type: Coordinated (Williams 2018) [Cooperative *and* data are shared, trainings are coordinated, interventions are developed]	Online survey	Resilience coalitions	8	Start of coalition	15.7	%	NR
				1 year	11.9		
		Preparedness coalitions	8	Start of coalition	9.7		
				1 year	5.3		
Activity type: Integrated (Williams 2018) [Coordinated *and* jointly implement activities such as trainings]	Online survey	Resilience coalitions	8	Start of coalition	21.3	%	NR
				1 year	24.1		
		Preparedness coalitions	8	Start of coalition	26.7		
				1 year	39.3		
Coalition activities for vulnerable population[E]: All (Bromley 2017)	Activity logs	Resilience coalitions	8	1-2 years (6/14-5/15)	28	#	NR
		Preparedness coalitions	8		32		
Coalition activities for vulnerable population[E]: Fair (Bromley 2017)	Activity logs	Resilience coalitions	8	1-2 years (6/14-5/15)	2 (7.1)	n (% of All)	NR
		Preparedness coalitions	8		16 (50)		
Coalition activities for vulnerable population[E]: Event (Bromley 2017)	Activity logs	Resilience coalitions	8	1-2 years (6/14-5/15)	3 (11)	n (% of All)	NR
		Preparedness coalitions	8		3 (9.4)		

Community Preparedness

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Chandra A, et al. 2015 PMID 26279093 25_Chandra et al-2015-Developing a tabletop exercise.pdf

Outcome	How Measured	Arm	N (Communities) Analyzed	Timing	Results	Metric	Difference
Coalition activities for vulnerable population[E]: Outreach (Bromley 2017)	Activity logs	Resilience coalitions	8	1-2 years (6/14-5/15)	3 (11)	n (% of All)	NR
		Preparedness coalitions	8		9 (28)		
Coalition activities for vulnerable population[E]: Training (Bromley 2017)	Activity logs	Resilience coalitions	8	1-2 years (6/14-5/15)	20 (71)	n (% of All)	NR
		Preparedness coalitions	8		4 (13)		
Partnership score in Tabletop exercise (Chandra 2015)	At exercise—Scale 1-5 (best performance)	Resilience coalitions	8	At exercise	Coalition consensus: 3.1 Study team raters: 2.3	mean	Not analyzed* (no important differences noted)
		Preparedness coalitions	8		Coalition consensus: 3.1 Study team raters: 2.1		
Engagement score in Tabletop exercise (Chandra 2015)	At exercise—Scale 1-5 (best performance)	Resilience coalitions	8	At exercise	Coalition consensus: 2.9 Study team raters: 2.0	mean	Not analyzed* (no important differences noted)
		Preparedness coalitions	8		Coalition consensus: 3.0 Study team raters: 2.1		
Education score in Tabletop exercise (Chandra 2015)	At exercise—Scale 1-5 (best performance)	Resilience coalitions	8	At exercise	Coalition consensus: 2.3 Study team raters: 1.9	mean	Not analyzed* (no important differences noted)
		Preparedness coalitions	8		Coalition consensus: 2.8 Study team raters: 2.1		
Self-Sufficiency score in Tabletop exercise (Chandra 2015)	At exercise—Scale 1-5 (best performance)	Resilience coalitions	8	At exercise	Coalition consensus: 3.1 Study team raters: 2.5	mean	Not analyzed* (no important differences noted)
		Preparedness coalitions	8		Coalition consensus: 2.8 Study team raters: 2.3		

* Not analyzed "because of sample sizes."

Williams 2018 also reported (in Table 2) percentage of respondents in each community type (resilience, preparedness coalitions) who reported on 14 specific completed activities (e.g., made or translated disaster materials, held community health worker training). Those in resilience coalitions and those in the preparedness coalitions were

each more likely to report completing 6 of the 14 activities (for 2 activities, 100% in both groups completed). No statistical analyses (or sample size data) reported.

[A] Among 11 essential community sectors with which partnerships can improve population health, resilience, and extend the reach of public health: Emergency management, health care, social services, cultural and faith-based groups and organizations, businesses, community leadership, housing and sheltering, media, mental/behavioral health, organizations serving the interests of at-risk populations such as older persons, and education and childcare.

[B] Measured as an index of three questions asking about the extent to which each of the other organizations in the coalition is reliable, supports the mission of the coalition, and is open to discussion). Responses options are (1) not at all, (2) a small amount, (3) a fair amount, (4) a great deal.

[C] Measured as an index of three questions asking about each organization's perception of the other partners as valuable to achieving the overall mission of the coalition in terms of power/influence, commitment, and resources available. Responses options are (1) not at all, (2) a small amount, (3) a fair amount, (4) a great deal.

[D] Density or the number of connections reported between organizations as a function of all possible connections; lower density suggests that there are greater opportunities to increase connections among partners within a coalition.

[E] "Subset of the community possessing a culture, language or other distinguishing characteristic that places them at higher risk in a disaster (e.g., school-aged children and their parents; ethnic minorities; homeless or food insecure populations)."

Results, Qualitative (Identified "themes regarding which issues were raised [during the tabletop exercise] and how coalitions planned to address the concerns"*)

- Tabletop scenario forced participants to test their assumptions about the organizations in the coalitions and the capacities they actually possessed. The example of the exercise was more complex than they anticipated.
- To allow the coalitions to react in real-time, they were not provided with the scenario before the intervention. This lack of ability to preplan or "read ahead" "unnerve[d] some coalition members, who were used to traditional exercise designs with well-practiced scenarios".
- Most coalitions did not have enough (both quantity and type) of the partner organizations needed for an escalating heat wave or changing conditions, particularly regarding engagement of organizations representing at-risk populations, and for an event that extended across a few months. Many coalitions noted that they did not have plans for reaching some of the housing developments or buildings that serve lower-income or immigrant populations.
- Coalitions particularly noted a lack of educational materials to cover topics as far ranging as heat to power outages to psychological impacts of disaster.
- Self-sufficiency was discussed similarly across coalitions as participants determined that they would have to function with limited government assistance in the early stages of a challenging event; plans and capacity for this had not been fully developed.
- Resilience coalition-specific themes:
    - Already had work plans and processes to help them involve partners and integrate education. However, active involvement of these groups was still difficult, including getting stakeholders to use resources and engage specific at-risk populations.
    - Most reliance coalitions noted that neighbor-to-neighbor networks (an aspect of self-sufficiency) were stronger than prior to development of the coalition. But they remained concerned regarding how to leverage daily stressful experiences to keep that level of self-sufficiency high.
    - Resilience coalitions felt well equipped with education but knew they needed to have a way to share that information with the broader community for an emergency or disaster that extended longer than a month.
    - Few coalitions had conducted a thorough asset analysis of their current organizational members, with attention to how those assets would be used or sequenced over a long response and recovery period.

* No description of the methodology used to collect, assess, or determine the themes, etc.

Community Preparedness

Williams MV, et al. 2018 PMID 29584681 127_Williams et al_2018_Evaluating Community Partnerships.pdf
Bromley E, et al. 2017 PMID 29065491 112_Bromley et al-2017-How do communities.pdf
Chandra A, et al. 2015 PMID 26279093 25_Chandra et al-2015-Developing a tabletop exercise.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Resilience coalitions were better prepared than Preparedness coalitions to implement the levers: Partnership, Engagement, Education, and Self-Sufficiency [*NB. It is not clear that the reported data support this conclusion.*] Both types of coalitions tended to have greater process and cooperative relationships than coordinated or integrated relationships. Process activities decreased and integrated activities increased over the first year in both coalition types. Both types of coalitions pursued activities focused on vulnerable populations. Resilience coalitions focused much more on trainings while Preparedness coalitions relied more on fairs ("and low-touch events"). Compared to Resilience coalitions, Preparedness coalitions pursued a more limited approach to increasing diversity, though reaching diverse communities was difficult for both types of coalitions."	Tabletop exercise effective for training. Resilience coalition may be more effective than Preparedness coalition to improve cooperation among partners and sectors. Resilience training may have resulted in larger coalitions with more and more varied partners. Larger coalitions may have had less trust to start but may have improved trust after 1 year. Resilience training used a specific toolkit of resilience activities, accompanied by training and facilitation provided by disaster-trained, public health nurses.	Not discussed	"The tabletop exercise is a critical community resilience tool for communities to assess their current and potential capacity to mitigate the impact of an event on their community and the people who live there, especially people who may need additional help." "All coalitions embraced the idea of diversity through inclusion of various sectors, diverse ethnic community members, and various languages, but achieving diversity was a continual challenge."	1 year follow-up may be inadequate for coalitions to fully develop or to demonstrate differences between Resilience and Preparedness coalitions. This study is a pilot effort / demonstration project. "Scores should be appropriately contextualized given the limitations of the scales used (eg, construct validity)." The diversity of climate and geography of LA may have impacted how different communities responded to the exercise, and may limit generalizability beyond LA. Lack of pre-identified and validated community resilience outcome measures	Not discussed	Few specific details about processes or participants to allow reproducibility or assessment of generalizability.

Community Preparedness

Williams MV, et al. 2018	PMID 29584681	127_Williams et al_2018_Evaluating Community Partnerships.pdf
Bromley E, et al. 2017	PMID 29065491	112_Bromley et al-2017-How do communities.pdf
Chandra A, et al. 2015	PMID 26279093	25_Chandra et al-2015-Developing a tabletop exercise.pdf

Tabletop exercises are useful to allow organizations to test resilience assets and capacities and to aid communities in determining how to improve resilience capacities. Particularly related to considerations about the right mix of partners and need to improve outreach to sectors (e.g., utilities, schools). Coalitions engaged in activities on which they received training.						

Community Preparedness

Williams MV, et al. 2018	PMID 29584681	127_Williams et al_2018_Evaluating Community Partnerships.pdf
Bromley E, et al. 2017	PMID 29065491	112_Bromley et al-2017-How do communities.pdf
Chandra A, et al. 2015	PMID 26279093	25_Chandra et al-2015-Developing a tabletop exercise.pdf

Risk of bias / Study Quality

Outcome*	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other	Overall assessment
Size measures (of coalitions)	Unclear[36]	Unclear[37]	Low	Unclear[38]	Unclear[39]	Low	Low	Unclear[40]	Low	Yes[41]	**Poor**
Time on coalition activities	Unclear	Unclear	Low	Unclear	Unclear	Low	Low	Unclear	Low	Yes	**Poor**
Trust among coalitions	Unclear	Unclear	Low	Unclear	Unclear	High[42]	Low	Unclear	Low	Yes	**Poor**
Value of partners	Unclear	Unclear	Low	Unclear	Unclear	High	Low	Unclear	Low	Yes	**Poor**
Density of coalitions	Unclear	Unclear	Low	Unclear	Unclear	Low	Low	Unclear	Low	Yes	**Poor**
Activity types (among coalitions)	Unclear	Unclear	Low	Unclear	Unclear	Low	Low	Unclear	Low	Yes	**Poor**
Coalition activities with vulnerable populations	Unclear	Unclear	Low	Unclear	Unclear	Low	Low	Unclear	Low	Yes	**Poor**
Tabletop exercise scores	Unclear	Unclear	Low	Unclear	Unclear	High[43]	Low	Unclear	Low	Yes	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[36] Not adequately described
[37] Not reported
[38] Not reported
[39] Sample sizes not reported
[40] Not blinded
[41] Based on caveat about diversity across analyzed coalitions, lack of subgroup analyses or other adjustments may introduce risk of bias.
[42] Unvalidated. Arguably, too short-term follow-up.
[43] Unvalidated. Arguably, too short-term follow-up. Inadequate sample size for analyses.

Community Preparedness

McCabe OL, et al. 2014 DMPHP PMID 25483596 McCabe et al_2014_Building_a_national_model
McCabe OL, et al. 2014 PHR PMID 25355980 McCabe et al_2014_An_Academic_Partnership

McCabe OL, Semon NL, Thompson CB, Lating JM, Everly GS, Perry CJ, Moore SS, Mosley AM, Links JM. **2014**. Building a national model of public mental health preparedness and community resilience: validation of a dual-intervention, systems-based approach. *Disaster Med Public Health Prep*. 2014 Dec;8(6):511-26. **PMID 25483596**

McCabe OL, Semon NL, Lating JM, Everly GS Jr, Perry CJ, Moore SS, Mosley AM, Thompson CB, Links JM. **2014**. An academic-government-faith partnership to build disaster mental health preparedness and community resilience. *Public Health Rep*. 2014;129 Suppl 4:96-106. **PMID 25355980**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Pre-post, prospective		US	Illinois, Iowa, and Maryland (4 rural and 3 urban)	None	2010-12

Studied entities and populations

A **Entities enrolled**: Leaders and members of religious congregations and recruits by faith-based organizations (FBO)
- ❖ No further substantive description
- ❖ 100% Christian, ~1/3 clergy, ~1/3 African American

B **Target population**: Church-goers as a conduit to the more general population
- ❖ No further substantive description

C **Deliverer/Implementer**: Academic, DHS, FBO leaders
- ❖ Academic: Johns Hopkins School of Public Health, School of Medicine, and affiliated hospitals (Johns Hopkins Preparedness and Emergency Response Research Center)
- ❖ DHS: Public health emergency planners at local health departments
- ❖ FBO: Clergy and lay leaders of FBOs

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Evaluate a "dual-intervention approach to enhancing public mental health preparedness and community resilience"	• Knowledge, skills, and attitudes • Frequency of use and effectiveness of training	• FBOs submitting plan drafts • Comprehensiveness of plan drafts	Pre- and post-training (implicitly immediately before and immediately after training) 1 year followup

Community Preparedness

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McCabe OL, et al. 2014 PHR PMID 25355980 McCabe et al_2014_An_Academic_Partnership

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
PFA/GPP training	Training workshop on disaster mental health, psychological first aid, and responder competency training. Led by academic faculty. Produced draft basic disaster plan for their FBO and community	1-day workshop	Not stated. Likely at FBO centers/churches	Current undersupply of prospective responders with disaster mental health expertise. A "lack of evidence-supported, competency-based interventions." Unclear what the rationale for centering around FBOs is.	• Education/training

Abbreviations: Psychological first aid (PFA) and guided preparedness planning (GPP).

Intervention, detailed

- 1-day workshop (6-7 hours) led by doctoral-level academic faculty with co-facilitation from local health department representatives.
- Slides, discussion, and technical assistance.
    - "All-hazards" orientation
    - Priority focus on mental and behavioral health surge
    - Special attention to at-risk populations ("e.g., persons with physical and psychological challenges, children and elderly, limited-visibility populations such as homeless).
    - Importance of partnerships between FBOs and local health departments
- Workbook-based 25-step planning protocol requiring input of information unique to each participant's organization and community.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
PFA/GPP training	Not discussed, but training by doctoral-level faculty is a potentially large resource	Not discussed. Of the (presumably Christian) faith-based communities.	Not discussed. Possibly the need for academic trainers.	No issues raised	Required a project champion in FBO to secure interest.	Training on "at risk populations" Reviewers have concerns about addressing the needs of disfavored populations in an equitable manner.	Close collaboration between major academic center faculty, DPH leaders, and FBO leaders.	No issues discussed.

Community Preparedness

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McCabe OL, et al. 2014 PHR PMID 25355980 McCabe et al_2014_An_Academic_Partnership

Results

Outcome	How Measured	N Analyzed	Timepoint	Results	Units	Comparison
Psychological First Aid (PFA) Evaluation Knowledge, self-reported	PFA Knowledge, Skills, and Attitudes Survey	≤387	Pre- Post-	11-61%* 86-98%*	%	37-78%* P<0.001 (all)
Psychological First Aid (PFA) Evaluation Skills, self-reported	PFA Knowledge, Skills, and Attitudes Survey	≤387	Pre- Post-	30-60%* 95-98%*	%	35-66%* P<0.001 (all)
Psychological First Aid (PFA) Evaluation Attitudes, self-reported	PFA Knowledge, Skills, and Attitudes Survey	≤387	Pre- Post-	23-95%* 36-98%*	%	37-78%* P<0.04 (except for need for PFA)
Psychological First Aid (PFA) Knowledge† Objective	Disaster Mental Health Knowledge Test (14 items)	≤387	Pre- Post-	7.4 10.3	items	2.9 (2.4, 3.5) <0.001
Guided Preparedness Planning (GPP) Evaluation Knowledge, self-reported	GPP Knowledge, Skills, and Attitudes Survey	≤387	Pre- Post-	42-84%* 94-100%*	%	16-53%* P<0.001 (all)
Guided Preparedness Planning (GPP) Evaluation Skills, self-reported	GPP Knowledge, Skills, and Attitudes Survey	≤387	Pre- Post-	16-63%* 75-97%*	%	34-64%* P<0.001 (all)
Guided Preparedness Planning (GPP) Evaluation Attitudes, self-reported	GPP Knowledge, Skills, and Attitudes Survey	≤387	Pre- Post-	58-96%* 80-100%*	%	0.3-22%* P≤0.002 (except for concern about CP)
Guided Preparedness Planning (GPP) Knowledge,† Objective	Community Disaster Preparedness Planning Test (15 items)	≤387	Pre- Post-	8.6 10.2	items	1.6 (0.9, 2.4) <0.001
Provision of PFA to disaster survivor at least once	Survey	67	1 year	19.4%	%	
Comprehensiveness of draft disaster preparedness plans, 100 point scale	Johns Hopkins Checklist for Disaster Plan Comprehensiveness	58 plans	w/in 6 mo	84-99 ‡	points	
Draft of basic disaster plan submission, %	Submitted	69 teams § 54 teams #	w/in 6 mo same-day	58 (84%) 52 (96%)	n (%)	

* Agreement that have skill, across multiple specific questions.

† McCabe 2014 *Public Health Rep* (PMID 25355980) provides item-level results, not extracted here.

‡ Means across 7 communities. Medians ranged from 78.5 to 100.

§ Data in the text and the table do not cleanly align. In the text, they reported that 58 (81%) of 69 teams submitted same day drafts of basic disaster plans. But 58/69=84%. More important, the table says that 58 plans were submitted in total (not just same-day.

Initially, the research group allowed up to 6 months to draft plans, but found this to be "momentum-destroying". After having low numbers of submissions from the first community within 6 months (6/15, 40%), they switched to requesting submission same day. The numbers in the table, here, are based on what they reported in their Table 6. However, in the text, they report that "since changing to a same-day plan submission policy, we recorded a 91% rate of plan submissions for all cohorts. It's not clear what the numbers of plans or teams were after the change in policy."

Community Preparedness

McCabe OL, et al. 2014 DMPHP PMID 25483596 McCabe et al_2014_Building_a_national_model
McCabe OL, et al. 2014 PHR PMID 25355980 McCabe et al_2014_An_Academic_Partnership

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Workshops substantially increased (immediate) knowledge and self-reported skills and attitudes about providing psychological first aid and to create emergency preparedness plans. Draft emergency preparedness plans created (mostly) the day of the workshop were deemed to be generally comprehensive.	Participatory model "involving the collaboration of stakeholders from diverse organizational cultures"	Not discussed	Discussions have long lists of course- and study-specific items that worked or could be improved (e.g., locating a "champion", deliver PFA before GPP).	"Inherent limitations to what can be accomplished during a 6- to 7-hour workshop." Unclear generalizability: implemented among Christians affiliated with FBOs. Apparently few non-African American minorities.	Continued refinement of the intervention with national feedback	

Community Preparedness

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McCabe OL, et al. 2014 PHR PMID 25355980 McCabe et al_2014_An_Academic_Partnership

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
PFA/GPP knowledge etc., Self-reported	High[44]	None (pre-post)	Low	Unclear[45]	Unclear[46]	High[47]	Low	High[48]	Low	No	**Poor**
PFA/GPP knowledge, Objective	High	None	Low	Unclear	Unclear	Low	Low	Low	Low	No	**Moderate**
Provision of PFA to disaster survivor at least once	High	None	None (XS)	Unclear	High[49]	Low	None (XS)	Low	Low	No	**Poor**
Disaster plan comprehensiveness	High	None	None	Unclear	Low	High[50]	None	High[51]	Low	No	**Poor**
Completed, percent	High	None	None	Unclear	Low	Low	None	Low	Low	Some[52]	**Moderate**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

Abbreviations: GPP = Guided Preparedness Planning, PFA = Psychological First Aid, XS = cross-sectional outcomes (only evaluable post-intervention)

[44] Not adequately described, including how selected. Convenience sample of likely highly motivated participants
[45] Not reported
[46] Unclear how many people did not complete exams (or how many items were left blank).
[47] Unvalidated, self-reported outcomes
[48] Unblinded assessment.
[49] Only about 17% responded to survey
[50] Unvalidated assessment of a seemingly arbitrary list of items with arbitrary weighting.
[51] Unblinded assessment.
[52] Lack of clarity about the actual numbers (percentages) of submitted draft plans, but the overall conclusion remains the same, regardless (>90% if submitted same day).

Risk of Bias Questions

- **Study population** (eligibility criteria). Was the included sample prespecified, clearly specified, defined, and uniformly applied? Low risk of bias (RoB) if yes, High RoB if no.
    - This domain is consistent across outcomes.
- **Allocation concealment (and randomization method).** For RCTs, was there a problem with randomization method or allocation concealment? High RoB if yes, Low RoB if explicitly no problem, Unclear RoB if insufficient reporting to judge. For NRCS (of different interventions), High RoB unless analytic methods used to adequately account for inherent baseline differences in compared groups or if it is otherwise reasonable to assume that compared groups are sufficiently similar. If pre-post study (of a single group), then "None."
    - This domain is consistent across outcomes.
- **Comparator group.** Was the comparator group chosen from same population, with same general eligibility criteria, as the intervention group? For RCTs, Low RoB. For NRCS, there is overlap between this assessment and the assessment of "Allocation." If pre-post study (of a single group), Low RoB (unless there is an indication that groups differed pre- and post-intervention).
    - This domain is consistent across outcomes.
- **Sample size.** Was there a justification of the sample size or power/analysis, per outcome? High RoB if no, Low RoB if yes (and the sample size was reached) or if the analysis was statistically significant.
    - This domain may differ for each outcome.
- **Loss to follow-up.** Was there high loss to follow-up, arbitrarily set at 20%, or was there was unequal loss to follow-up between groups? This is based largely on comparisons between enrolled (or randomized) individuals and the numbers analyzed. High RoB if yes, Low RoB if no.
    - This domain may differ for each outcome.
- **Outcome measurement or ascertainment bias**. Was there a problem with how each outcome was measured? High RoB if unvalidated subjective outcome. For studies comparing different interventions, includes whether outcome was measured differently in the different intervention groups.
    - This domain may differ for each outcome.
- **Group similarity at baseline**. Were the groups (intervention and comparator) similar at baseline? If similar, Low RoB. If there is a (non-minor) difference, for each outcome was the difference statistically accounted for? Judgment of whether a difference was "non-minor" depended on both statistical and clinical significance. Unclear RoB only if baseline descriptions were omitted or were too sparse to evaluate for possible differences. If pre-post study (of a single group), Low RoB (unless there's an indication that groups differed pre- and post-intervention).
    - This domain may differ for each outcome (primarily based on whether adequate statistical adjustment was conducted).
- **Outcome assessor blinding**. Regardless of study design, was the outcome assessor blinded or were there methods to minimize biased outcome assessment? "Hard" outcomes (unambiguous, potentially like death) or outcomes based on objective measurements (e.g., laboratory measurements or governmental records, such as number quarantined) generally qualify as Low RoB, as do outcomes that are explicitly blinded. Other outcomes from observational studies are assumed to have High RoB unless otherwise indicated. Self-reported outcomes are typically High RoB unless the participants are blinded to their intervention.
    - This domain may differ for each outcome.
- **Group differences/confounders.** Did the analyses account for potential group differences or confounders, for example by multivariable adjustment or propensity score analysis? For RCTs, assume Low RoB unless there is a suggestion of a lack of similarity between groups (despite randomization). For NRCS, regardless of whether groups were similar at baseline, High RoB if they did not adjust for potential differences or if they adjusted only for something minor or insufficient (e.g., only sex across disparate populations). For pre-post studies, Low RoB (unless there is an indication that groups differed pre- and post-intervention).
    - This domain may differ for each outcome.
- **Other** important limitations per data extractor or as reported by study authors.
    - This domain may differ for each outcome.

McCabe OL, Perry C, Azur M, Taylor HG, Bailey M, Links JM. Psychological first-aid training for paraprofessionals: a systems-based model for enhancing capacity of rural emergency responses. **2011**. *Prehosp Disaster Med*. 2011 Aug;26(4):251-8. **PMID 22008099**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	Motivational Preparedness Training in Psychological First Aid (MPT/PFA)	US	Rural Maryland	None	2008

Note that this article presents the first of two phases of an overall intervention. The second phase is presented in McCabe et al. 2013.

Studied entities and populations

A **Entities enrolled**:
- ❖ Christian faith-based organizations

B **Target population**: Rural communities
- ❖ Those served by Christian faith-based organizations in rural counties

C **Deliverer/Implementer**: Academic Center, Clinicians, DPH
- ❖ Licensed, doctoral-level psychologists with extensive experience as disaster responders and disaster mental health trainers
- ❖ Co-hosted by local health departments and public health officials

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
MPT/PFA	Training to impart relevant knowledge, skills, and attitudes so they can become paraprofessional responders to provide mental health services during a disaster	1-day format (7 hours)	LHDs (implied)	FBOs can provide a "vital, indigenous, frontline resource for trauma-specific psychological interventions"	• Training

Intervention, detailed

- Training to impart relevant knowledge, skills, and attitudes so they can become paraprofessional responders to provide mental health services during a disaster using a PFA training model concordant with (1) self- and community efficacy, (2) a sense of safety, (3) calming, (4) connectedness, and (5) hope.
- Training event also provides a forum for local health departments and faith-based organizations to become acquainted and develop a "partnership mindset."
- Training sessions involved a combination of didactic (PowerPoint-based) and experiential (group exercise, role playing, discussions) teaching methods. Derived from a PFA model originally developed for health professionals. Customized to focus on rural populations, including the provision of special-needs information on children, the elderly, and persons with physical or psychiatric conditions.
- Four modules
  - Introduction to Disasters and Behavioral Health Surge
  - Reflective Listening, Assessment, Prioritization, Intervention, and Disposition (RAPID) Model of PFA
  - Special Needs of Vulnerable Populations
  - Self Care and Practical Resources for the Caregiver

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
MPT/PFA	Not explicitly described. Organization and involvement of many FBOs. Highly trained and experienced trainers. Multiple 1-day courses	Not discussed Aimed at Christian FBOs.	Implementation (deployment) of paraprofessional mental health providers during an emergency required changes in State policies	Success of the LHD partners to participate in the project is seen as a vital criterion for proof of concept.	Excellent	Session, in part, focuses on special needs populations. Trainees: 66% white, 25% black, 6% Hispanic; 71% female. Real-time translation provided to monolingual Spanish speakers. Area covered is 19.5% elderly (compared with 11.6% in the state).	Academic, DPH, and FBOs	No discussion of potential impact on unfavored groups by relying on FBOs.

Results

Outcome	Definition	How Measured	N Analyzed	Results	Units
FBOs per county (LHD)	The mean (full range) number of FBOs successfully recruited per Local Health Department		4*	30 (11-56)	
Participants per FBO	The mean (full range) number of participants recruited per enrolled FBO		120 parishes	2.0 (1.1-2.4)	
Training addressed concepts	Agreed or Strongly Agreed that concepts in disaster mental health were addressed: Mental health surge, Signs and symptoms of stress, Special needs of at-risk groups, Precursors/predictors of PTSD, Principles of psychological first aid, Harmful behaviors in crisis work, Principles of self-care	Evaluation forms	178 †	97-99	%
Training addressed techniques	Agreed or Strongly Agreed that techniques for disaster mental health were addressed: Reflective listening, Assessment/prioritization, Intervention, Disposition/referral, Addressing special needs, Suicidality recognition/referral	Evaluation forms	178	93-98	%
Stated willingness to respond	Applications to State Professional Volunteer Corps immediately post-training	Applications	178	31.5	%
State (Maryland) policy change	Maryland Dept. of Health and Mental Hygiene approved applicants as a new paraprofessional class of disaster mental health responders.				

* Of 5 Local Health Departments approached (one declined because of competing obligations, but donated space to the project.
† Of 238 registered participants. Only fully-completed, legible forms were analyzed.

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Considerable variability in LHD success in recruiting FBP participation. This was ascribed to different extents of prior informal relationships with the faith communities. Cautious claim about effectiveness of training (in a nonrandomized study with only post-test data); however, data are not reported to assess true effectiveness. Training resulted in numerous new lay members of a volunteer corps that can be called upon during a disaster.	Not discussed	Not discussed	Affected State policies Created new class of mental health paraprofessionals FBOs were a successful source of trainees	No true assessment of program (except numbers of participants and immediate "self-efficacy", really questions about whether topics were covered). Noncomparative (either with untrained, alternative training, or pre-training). High rate of data loss. Likely that those who failed to legibly complete evaluation forms were less enthusiastic about the training. May not be generalizable to urban or suburban communities, different faiths, etc.	Barriers to and facilitators of LHD/FBO collaboration Assessment of competencies post-training, particularly after a disaster	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Numbers of participants	High[53]	None (single group)	None (single group)	Unclear[54]	Low	Low	None (single group)	Low	None (single group)	No	**Moderate**
Training addressed concepts/techniques	High	None	None	Unclear	High[55]	High[56]	None	High[57]	None	No	**Poor**
Stated willingness to respond	High	None	None	Unclear	Low	Low	None	Low	None	No	**Moderate**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[53] Not adequately described, including how selected. Convenience sample of likely highly motivated participants.
[54] Not reported
[55] 21%; likely dissimilar from analyzed in terms of opinions about training.
[56] Mostly unvalidated outcomes about what was presented in training. Therefore, no comparison with pre-training.
[57] Unblinded assessment.

McCabe OL, Perry C, Azur M, Taylor HG, Gwon H, Mosley A, Semon N, Links JM. **2013**. Guided preparedness planning with lay communities: enhancing capacity of rural emergency response through a systems-based partnership. *Prehosp Disaster Med*. 28(1):8-15. **PMID 23174414**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	Guided Preparedness Planning (GPP)	US	Rural Maryland	None	2008

Note that this article presents the second of two phases of an overall intervention. The first phase is presented in McCabe et al. 2011.

Studied entities and populations

A **Entities enrolled**: FBO
- ❖ Faith-based organizations

B **Target population**: Rural communities
- ❖ Those served by Christian faith-based organizations in rural counties

C **Deliverer/Implementer**: Academic center, Clinicians, DPH
- ❖ Licensed, doctoral-level psychologists with extensive experience as disaster responders and disaster mental health trainers
- ❖ Co-hosted by local health departments and public health officials

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
GPP	Training session and workshops to teach and then draft disaster preparedness plans	Didactic session: 1 full day. Workshops: NR	LHDs (implied)	Without the aid of expert support, the process of developing viable disaster plans remains a daunting challenge for the individual, organization, or community. Faith communities appear to be an especially valuable resource for enhancing community response to behavioral health surges, but their true potential likely would be realized only within the context of formal relationships with government agencies whose missions relate to emergency preparedness. The full potential of government/faith partnerships is likely to remain dormant with a third, appropriately-qualified agent to catalyze, coordinate, and guide such joint ventures (e.g., an academic health center)	• Training • Behavioral • Environmental*

* Based on promised equipment as incentives to participate and prepare preparedness plans.

Intervention, detailed

- Training (one full day session), using a professional continuing medical education/continuing education unit format, with didactic (PowerPoint) and experiential (discussion of vignettes) teaching methods.
- Technical assistance workshops comprising emergency planners from each LHD and FBO representatives, co-led and facilitated by Johns Hopkins faculty.
- Session and workshops established parameters for disaster planning templates, including (1) adoption of an "all-hazards" orientation; (2) identification of the key functions needing to be performed in emergency contexts, and which persons in the target communities have qualifications that fit with those responsibilities; (3) priority focus on mental and behavioral health surge issues; (4) special attention to vulnerable populations; (5) sensitivity to socio-cultural issues, including rural residence; and (6) the least possible respondent burden to maximize likelihood of adherence to the planning protocol and overall project requirements.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
GPP	Not explicitly described. Organization and involvement of many FBOs. Highly trained and experienced trainers. Multiple 1-day courses and training sessions. FBOs received customized "go-kits" for their organizations, comprised of emergency tools and supplies, hand-crank radio receivers, CB radios, walkie-talkies, flashlights, blankets, water, and hand sanitizers.	Not discussed Aimed at Christian FBOs.	None described	Not clearly described	Excellent	Session, in part, focuses on special needs populations. Trainees: 67% white, 31% black, 1% Hispanic; 73% female. Real-time translation provided to monolingual Spanish speakers. Area covered is 19.5% elderly (compared with 11.6% in the state).	AHC, DPH, and FBOs	No discussion of potential impact on unfavored groups by relying on FBOs.

Results

Outcome	Definition	How Measured	N Analyzed	Results	Units
FBOs per county (LHD)	The mean (full range) number of FBOs successfully recruited per Local Health Department		4*	25 (11-41)	
Participants per FBO	The mean (full range) number of participants recruited per enrolled FBO		100 FBOs	2.1 (1.2-2.9)	
Knowledge/Skills: Command structure	Agreed / Strongly Agreed that knowledge and skills were acquired about command structure.	Evaluation forms	169 †	56/43	%
Knowledge/Skills: Key leadership roles	Agreed / Strongly Agreed that knowledge and skills were acquired about key leadership roles.	Evaluation forms	166 †	55/42	%
Knowledge/Skills: "All hazards" approach	Agreed / Strongly Agreed that knowledge and skills were acquired about the all-hazards approach	Evaluation forms	166 †	49/41	%
Knowledge/Skills: Importance of Partnerships	Agreed / Strongly Agreed that knowledge and skills were acquired about importance of partnerships	Evaluation forms	169 †	40/60	%
Knowledge/Skills: Vulnerable populations	Agreed / Strongly Agreed that knowledge and skills were acquired about vulnerable populations	Evaluation forms	168 †	39/60	%
Knowledge/Skills: Psychological needs	Agreed / Strongly Agreed that knowledge and skills were acquired about psychological needs	Evaluation forms	169 †	43/52	%
Knowledge/Skills: Ability to create a plan	Agreed / Strongly Agreed that knowledge and skills were acquired about ability to create a plan	Evaluation forms	163 †	52/43	%
Opinion: Content matched goals	Agreed / Strongly Agreed that program content matched goals	Evaluation forms	167 †	41/57	%
Opinion: Planning concepts learned	Agreed / Strongly Agreed that planning concepts were learned	Evaluation forms	173 †	39/58	%
Opinion: Sufficient interaction time	Agreed / Strongly Agreed that there was sufficient interaction time	Evaluation forms	173 †	42/51	%
Opinion: Valuable, useful experience	Agreed / Strongly Agreed that the program was a valuable and useful experience	Evaluation forms	171 †	37/61	%
LHD new ideas for collaboration	New ideas generated for nurturing their new relationships with the community and for reaching out to new communities, mean (range)		4 LHDs	6 (3-8) ‡	
Completed disaster plans	Not further defined	Submitted to LHDs	100 FBOs	15#	%

* Of 5 Local Health Departments approached (one declined because of competing obligations, but donated space to the project.

† Of 210 registered participants. Only fully-completed forms were analyzed. Excludes all 15 monolingual Spanish speakers (no Spanish evaluation forms available).

‡ Representative ideas included:

- Provide "booster shot" GPP training
- Monitor progress in plan development, and continue to provide technical assistance, as needed
- Collaborate in testing FBP completed disaster plans with exercises, drills, etc.

- Conduct quarterly meetings with faith leaders to assess ongoing needs, set goals, and provide support
- Promote awareness in the faith and lay community of all county emergency programs and services
- Develop formal advisory committees to review faith- and health department plans, exchange updates, and take part in educational activities
- Consider ways that the advisory groups can be integrated into established, ongoing meeting structures of other organizations, faith and secular
- Develop mutual-aid agreements with other county faith and secular organizations
- Develop relations between faith organizations and other agencies in the emergency preparedness community
- Conduct outreach to new FBOs, for example through community health outreach workers
- Maintain, expand, and regularly update database(s) of current and new individual and organizational FBO participants

All 15 were generated in one county (of 4) under the leadership of an especially active LHD emergency planner.

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Following the training session, participants proved able to develop at least partial drafts of community disaster mental health plans on behalf of their respective faith communities. [Only partial evidence is provided regarding this conclusion.] Appropriate leaders of LHDs, FBOs, and AHCs can work effectively to execute an approach that has the potential for being a practical, effective, and widely applicable model of capacity building at multiple levels in the public mental health emergency planning. The model supports and enhances Tiers 2, 3, and 4 in the "Medical Surge Capacity and Capability Management System": within a county through coalitions (Tier 2), across disciplines (Tier 3), and within a region (Tier 4).	LHD outreach strategies: meeting with ministerial associations, email messages, church bulletin inserts, community flyers, and word-of-mouth communications following in-person presentations to clergy and lay ministerial leaders	LHD outreach strategies: radio spots, postal mailings, outreach to smaller FBOs (due to difficulty finding phone numbers and addresses. Draft plans: Missing information most often related to names of individuals to serve Incident Command System leadership roles (particularly for smaller parishes), and an explicit delineation of the target population (These deficiencies were addressed in subsequent workshops.)	"Especially active" role of an LHD emergency preparedness officer is needed to yield completed emergency preparedness plans.	No true assessment of program (except numbers of participants and immediate opinions of program). Noncomparative (either with untrained, alternative training, or pre-training). High rate of data loss. Likely that those who failed to legibly complete evaluation forms were less enthusiastic about the training. May not be generalizable to urban or suburban communities, different faiths, etc.	Plans to make the training materials available for local, regional, and national application (after further refinement and validation). Plan to (1) advance the outcomes logic model by differentiating more clearly the levels and types of impact on the public health emergency preparedness system; (2) validate planning templates, measuring instruments, and outcome metrics; (3) adopt a pre-post measurement schedule; (4) add multiple choice questions to better assess acquisition of relevant knowledge, skills, and attitude constructs; (5) characterize effective partnership sustaining activities; (6) enhance model replicability by creating a manual of the GPP protocol; (7) determine what participant, process, and context factors are predictors of moderators of successful plan development.	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Numbers of participants	High[58]	None (single group)	None (single group)	Unclear[59]	Low	Low	None (single group)	Low	None (single group)	No	**Moderate**
Knowledge/Skills	High	None	None	Unclear	High[60]	High[61]	None	High[62]	None	No	**Poor**
Opinions about course	High	None	None	Unclear	High	High[63]	None	High	None	No	**Poor**
LHD new ideas for collaboration	High	None	None	Unclear	Low	Low	None	Low	None	No	**Moderate**
Completed disaster plans	High	None	None	Unclear	Low	Low	None	Low	None	No	**Moderate**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[58] Not adequately described, including how selected. Convenience sample of likely highly motivated participants.
[59] Not reported
[60] 26%; likely dissimilar from analyzed in terms of opinions about training; excludes Spanish-speakers.
[61] Opinions about self-learning from training. Therefore no comparison with pre-training.
[62] Unblinded assessment.
[63] Opinions about course. Therefore no comparison with pre-training.

Laborde DJ, Magruder K, Caye J, Parrish T. **2013**. Feasibility of disaster mental health preparedness training for black communities. *Disaster Med Public Health Prep*. 2013 Jun;7(3):302-12. **PMID 22752411**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	None	US	Lenoir County, North Carolina	None	2009-10

Studied entities and populations

A **Entities enrolled**: Clinicians, CBO
- ❖ Mental health providers (who were trained to be trainers), not further described
- ❖ CBO leaders
  - ▪ Adult, embedded and respected in communities, cultural translators, in a position to deliver post-disaster mental health training
- ❖ Clinical providers
  - ▪ ≥2 years clinical experience; physician, nurse, nurse practitioner, clinical psychologist, or social worker; have tailored their services to the diversity of the local black community; in a position to deliver post-disaster mental health training

B **Target population**: Black, poor, rural communities
- ❖ Representative county from among those with the highest black populations and high indices of poverty (in North Carolina). Representative of regional vulnerable areas because of its proportion of black residents living in poverty, history of post-disaster hardships, and lack of access to mental health services and infrastructure.

C **Deliverer/Implementer**: Academic, Clinicians
- ❖ Study researchers (trained the mental health providers; implied)
- ❖ Mental health providers (trained the CBO leaders and clinical providers)

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Train-the-trainers	Training of mental health providers to provide post-disaster mental health training focused on poor, black, rural communities	2.5-day workshop	Local business development center, community health center, and hotel conference rooms.	Post-disaster mental health services should be contextualized to meet the needs of local populations, and can be delivered by appropriately trained non-mental health providers. Mental health preparedness training of community insiders can increase social capital in underserved minority populations.	• Education
Post-disaster mental health training	Post-disaster mental health training focused on poor, black, rural communities	1 day workshop	Same	Same	• Education

Intervention, detailed

- Development and tailoring of a post-disaster mental health curriculum for black communities
  - Core competency manual, web-based exercises, a trainer's manual, separate modules for clinical providers and CBO leaders. These covered how the local black population labels and communicates distress, understands the causes of mental health problems, perceives the provision of mental health care, and uses and responds to mental health interventions.
  - Cooperative learning activities involving stakeholder engagement and input on vignettes, video clips, and cooperative exercises
  - Framework provided for taking additional steps in partnering and planning among those who have been trained as well as across emergency response planning entities.
- The train-the-trainers curriculum was developed iteratively based on a comprehensive and critical review of existing training materials and resources, four focus groups and two in-depth interviews with 13 CBO leaders and 7 clinical providers. Then formulated training competency knowledge and skills outcomes for each identified topic.
  - African American team members assisted in tailoring each topic content according to the language, persons, metaphors, content, concepts, goals, methods, and context dimensions.
  - The trainer guide included a description of the training, preparation, trainer's role and responsibilities, tips for ensuring supportive cooperative learning, logistics, a proposed schedule, and annotated content.
- Post-disaster mental health training
  - Core curriculum materials were split into separate sets of CBO leader and clinical provider topic modules and crafted corresponding module content, cooperative learning exercises, training aids, and trainer guides. Mental health treatment module was restricted to training of physician providers and designed to be facilitated by a licensed psychiatrist trainer); cognitive-based stress-reduction techniques taught to all clinical providers.
  - The CBO leader modules had more emphasis on background and communicating about mental health reactions, facilitating referral, and psychological first aid

methods. The screening section focused on cultural ways to address stigma and educate survivors on stress, coping, and assistance in accessing mental health services.

- The clinical provider modules had more emphasis on developing cultural competence, case referral and follow-up, cognitive-based approaches, and acute episode psychotherapy.
- Both sets of modules were further tailored with local illustrative vignettes and film clips to highlight cultural aspects of disasters in black communities and a list of resources.
- Web-based collaborative e-learning exercises, with "brain-storming," development of lists of community resources, and mapping

Topics Selected for Postdisaster Mental Health Training for Black Communities[a]

	Core Training Topics
Topic 1:	Disasters
Topic 2:	Factors that Affect Disaster Response
Topic 3:	Coping Mechanisms
Topic 4:	Loss and Grief
Topic 5:	Emotional Recovery After a Disaster
Topic 6:	Mental Distress vs Mental Disorder
Topic 7:	Screening
Topic 8:	Disaster Response with Youth and Families
Topic 9:	Cultural Issues in Disaster Response
Topic 10:	Self-care
Topic 11:	Planning and Mitigation
Topic 12:	Treatment of Mental Health Disorders After a Disaster
Topic 13:	Facilitation of Workshops (for trainers only)
	Community-Based Organization Leader Training Topics
Introduction	
Topic 1:	Disasters
Topic 2:	Psychological Response to Disaster
Topic 3:	Stress and Coping
Topic 4:	Emotional Recovery
Topic 5:	Mental Distress vs Mental Disorder
Topic 6:	Screening and Referral
Topic 7:	Self-care
Topic 8:	Preparedness Planning
	Local Clinical Provider Training Topics
Introduction	
Topic 1:	Disasters
Topic 2:	Psychological Response to Disaster
Topic 3:	Emotional Recovery
Topic 4:	Cultural Issues in Disaster Response
Topic 5:	Mental Distress vs Mental Disorder
Topic 6:	Screening and Referral
Topic 7:	Self-care
Topic 8:	Preparedness Planning
Topic 9:	Mental Health Treatment Interventions

[a] HERMES, LLC, Wilmington, North Carolina; 2008-2010.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Train-the-trainers	Intensive, iterative, complex curriculum development process. Multi-day workshop for mental health specialists. Focus group, interview participants, and workshop participants each received $100-$200 per day and travel expenses.	Heavily inclusive of local cultural elements	Not discussed	Apparently difficult to recruit trainees willing to fully participate. See "Acceptability"	"We have identified evidence-based training components and procedures that are acceptable and feasible"	Focused on underserved community (poor, black, rural) Trainers: 80% black, 40% women	Multiple participants from academia, a wide range of mental health specialists, CBO leaders, and clinical providers	Not discussed
Post-disaster mental health training	(Separate) Intensive, iterative, complex curriculum development process. Separate curricula for different sets of trainees. Multiple full-day workshops. Focus group, interview participants, and workshop participants each received $100-$200 per day and travel expenses.	Same	Not discussed	Study is billed as feasibility study. Concluded "feasible".	Same	Focused on underserved community (poor, black, rural) Trainees: 73% black, 73% women	Same	Not discussed

Results

Outcome	Definition	How Measured	Subgroup	N* Analyzed	Results	Units	Comparison
Knowledge test, score	Core competency test score, correct answers, mean (SD)	Post-course test		28	71 (12.7)	%	
			Providers†	15†	**80 (7.3)**		**P<0.001**
			CBO leaders	13	**61 (8.8)**		
Knowledge test, "pass"	17/20 correct answers	Post-course test		28	>50	%	
Knowledge: factors affecting disaster-related reactions and emotional regulation	Correct specific answers	Post-course test		28	100	%	
Knowledge: types of people not in need of PDMH monitoring	Correct specific answers	Post-course test		28	96	%	
Knowledge: post-disaster support for youth and family	Correct specific answers	Post-course test		28	93	%	
Knowledge: disaster phase during which PTSD is usually diagnosed	Correct specific answers	Post-course test		28	43	%	
Knowledge: characteristics of Mundane Extreme Environmental Stress (MEES)	Correct specific answers	Post-course test	Trainers	5	100	%	
			CBO leaders	13	0		NR
			Clinical providers	10	30		
Knowledge: General disaster mental health	Correct specific answers	Post-course test	Providers†	15†	73	%	NS
			CBO leaders	13	64		
Knowledge: Factors affecting mental health response	Correct specific answers	Post-course test	Providers†	15†	**83**	**%**	**P<0.001**
			CBO leaders	13	**42**		
Knowledge: Psychological first aid	Correct specific answers	Post-course test	Providers†	15†	63	%	NS
			CBO leaders	13	54		
Knowledge: Acute stress reaction	Correct specific answers	Post-course test	Providers†	15†	**83**	**%**	**P<0.001**
			CBO leaders	13	**46**		
Knowledge: Mental health support in black communities	Correct specific answers	Post-course test	Providers†	15†	84	%	NS
			CBO leaders	13	82		

Outcome	Definition	How Measured	Subgroup	N* Analyzed	Results	Units	Comparison
Knowledge: Screening and/or referral	Correct specific answers	Post-course test	Providers†	15†	84	%	NS
			CBO leaders	13	77		
Knowledge: Definition of mental health disorders	Correct specific answers	Post-course test	Providers†	15†	**93**	**%**	**P<0.001 (implied)**
			CBO leaders	13	**0**		
Evaluation: • distinguishing between mental distress and mental disorder • explaining the influence of culture in survivors' responses to disaster • importance of cultural competence and cultural humility • identifying how disasters can affect responders and the ABCs of self-care for responders	"Somewhat met" or ''very well met''	Post-course evaluation		28?	>90	%	
Evaluation: Training effectiveness in meeting learning objectives	"Very well met"	Post-course evaluation	Trainers	4?	50	%	NR
			CBO leaders	12?	75		
			Clinical providers	9?	55		

Also overall and subgroup data on evaluation of different dimensions of training in article's Figure 4 (content, presentation, participant guide, group exercise). Mostly ≥80% positive ratings ("useful" or "very useful").
Also narrative feedback about training specifics and "usability testing of web-based training" module by 2 clinical providers and 5 CBO leaders (page 309, 8 of 11 in pdf).

PDMH = post-disaster mental health, PTSD = post-traumatic stress disorder.

* Includes 5 trainers, 13 CBO leaders (although Table 2 describes only 12 of them), and 10 clinical providers.
† Combined trainers (mental health providers) and clinical providers.

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
We have identified evidence-based training components and procedures that are acceptable and feasible and resulted in self-reported increased knowledge and improved self-efficacy among participants who can contribute to black community mental health preparedness and planning. Community insiders can more effectively connect disaster survivors who experience problematic emotional responses or other mental health problems to local providers who can be activated in the immediate aftermath of a disaster.	Overall, training and course raised knowledge about handling post-disaster mental health issues. Incorporating CBO leaders and providers from poor, rural black communities, and training on their specific needs and culture.	CBO leaders, in particular, were not well trained on some topics (particularly, factors affecting mental health response and acute stress reaction)	The training raises cultural awareness and dispels the damaging and stigmatizing images of helpless black communities by recognizing the important contributions and potential of targeted communities in disaster mental health response. This repositioning of disaster mental health planning integrates local knowledge of social ecology for mitigating the individual and collective trauma of disasters.	Noncomparative (either with untrained, alternative training, or pre-training). Some lack of clarity of numbers evaluated. May not be generalizable to urban or suburban communities, different races/ethnicities, etc.	The training and collaborative planning warrant further testing of adaptability, effectiveness, and sustain-ability. Findings from this study will be used to refine assessment tools and benchmarking in the evaluation of a larger study across multiple black community settings and similar efforts to disseminate disaster mental health competencies.	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Knowledge test	High[64]	None (single group)	None (single group)	Unclear[65]	Low	High[66]	None (single group)	Low	None (single group)	No	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

Evaluations of training not included in RoB assessment.

[64] Convenience sample of likely highly motivated participants.

[65] Not reported

[66] Unvalidated test. No comparison with pre-training (or untrained group).

McCabe OL, Mosley AM, Gwon HS, Everly GS Jr, Lating JM, Links JM, Kaminsky MJ. **2008**. The tower of ivory meets the house of worship: psychological first aid training for the faith community. *Int J Emerg Ment Health*. 9(3):171-80.

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	None	US	Maryland	None	Pre-2008

Studied entities and populations

A **Entities enrolled**:
- ❖ Christian clergy

B **Target population**: Urban and non-urban communities
- ❖ Those served by Christian faith-based organizations

C **Deliverer/Implementer**: Academic Center, FBO
- ❖ Two doctoral-level disaster mental health experts from Johns Hopkins
- ❖ Six members of the clergy, one of whom was a board-certified psychiatrist.

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Psychological First Aid (PFA) training	4 training modules on stress reactions, PFA and crisis intervention, pastoral care and disaster ministry, and self-care. A disaster tool kit.	1 day (7 hours)	Not reported	"FBOs have extraordinary potential for delivering crisis intervention services to survivors of disasters." Per IOM, responders outside the mental health profession "require knowledge and training in order to provide effective support."	• Training

Intervention, detailed

- Psychological First Aid (PFA) brief training to enhancing spiritual caregivers' perceived self-efficacy in responding to members of their communities who might need (psychological) trauma-related support following disasters.
- 2 academic and 6 clergy trainees
- Training sessions each had approximately 55 trainees
- Four modules
  - Stress Reactions of Mind, Body & Spirit
  - Psychological First Aid and Crisis Intervention
  - Pastoral Care and Disaster Ministry
  - Self Care and Practical Resources for Spiritual Caregivers

Community Preparedness

McCabe et al. 2008 PMID 18372659 McCabe et al_2008_Tower of Ivory.pdf

- Spanish-language translations of the 200-slide PPT program and of the program evaluation forms were created.
- incorporated the use of only Christian scripture and images into the PowerPoint slides and Tool Kit content. Each session opened and closed with a prayer

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
PFA training	Not discussed	Religious Christian. No description of values or preferences	None reported	Able to train large numbers of clergy	Participating non-Christians were not satisfied with the training course	~15 of clergy Spanish speaking Focus on African American community	Academic and FBOs	No discussion of potential impact on unfavored groups by relying on Christian FBOs.

Results

Outcome	Definition	How Measured	N Analyzed	Results	Units
Enhancement of self-perceived self-efficacy with PFA competencies	Rating of quality of program very good or excellent	Program evaluation	384		
Recognize stress and acute stress disorder				90.6	%
Recognize PTSD characteristics				91.5	%
Understand relationship between trauma and substance use				82.7	%
Understand principles of providing individual PFA				85.5	%
Understand principles of providing group/congregational PFA				81.5	%
Awareness of key feature of disaster ministry				85.9	%
Accessing psychosocial and psychiatric resources				77.1	%
Planning and self-care strategies for the Spiritual Care Giver				89.6	%

Community Preparedness

McCabe et al. 2008 PMID 18372659 McCabe et al_2008_Tower of Ivory.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
"The majority of trainees perceived the program as having significantly enhanced their knowledge of a model of crisis intervention known as Psychological First Aid, and increased their confidence in disaster ministry with their congregations and others persons who might be future victims of trauma."	Academic and FBO collaboration	Overtly Christian focus	Required buy in of religious leaders and academic personnel with pre-existing relationships with key leaders in the faith community.	(No recognition of inherent study design limitations) Noncomparative. Only opinion-based outcomes regarding the "quality" of the training.	Participants requested further specialized training.	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Course assessment	High[67]	None (single group)	None (single group)	Unclear[68]	High[69]	High[70]	None (single group)	High[71]	None (single group)	No	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[67] Not adequately described, including how selected. Convenience sample of likely highly motivated participants.

[68] Not reported

[69] ~25% did not complete questionnaire.

[70] Unvalidated, self-reported outcomes about course quality. Therefore no comparison with pre-training.

[71] Unblinded assessment.

Risk of Bias Questions

Note that these questions were designed to evaluate comparative studies.

- **Study population** (eligibility criteria). Was the included sample prespecified, clearly specified, defined, and uniformly applied? Low risk of bias (RoB) if yes, High RoB if no.
    - This domain is consistent across outcomes.
- **Allocation concealment (and randomization method).** For RCTs, was there a problem with randomization method or allocation concealment? High RoB if yes, Low RoB if explicitly no problem, Unclear RoB if insufficient reporting to judge. For NRCS (of different interventions), High RoB unless analytic methods used to adequately account for inherent baseline differences in compared groups or if it is otherwise reasonable to assume that compared groups are sufficiently similar. If pre-post study (of a single group), then "None."
    - This domain is consistent across outcomes.
- **Comparator group.** Was the comparator group chosen from same population, with same general eligibility criteria, as the intervention group? For RCTs, Low RoB. For NRCS, there is overlap between this assessment and the assessment of "Allocation." If pre-post study (of a single group), Low RoB (unless there is an indication that groups differed pre- and post-intervention).
    - This domain is consistent across outcomes.
- **Sample size.** Was there a justification of the sample size or power/analysis, per outcome? High RoB if no, Low RoB if yes (and the sample size was reached) or if the analysis was statistically significant.
    - This domain may differ for each outcome.
- **Loss to follow-up.** Was there high loss to follow-up, arbitrarily set at 20%, or was there was unequal loss to follow-up between groups? This is based largely on comparisons between enrolled (or randomized) individuals and the numbers analyzed. High RoB if yes, Low RoB if no.
    - This domain may differ for each outcome.
- **Outcome measurement or ascertainment bias**. Was there a problem with how each outcome was measured? High RoB if unvalidated subjective outcome. For studies comparing different interventions, includes whether outcome was measured differently in the different intervention groups.
    - This domain may differ for each outcome.
- **Group similarity at baseline**. Were the groups (intervention and comparator) similar at baseline? If similar, Low RoB. If there is a (non-minor) difference, for each outcome was the difference statistically accounted for? Judgment of whether a difference was "non-minor" depended on both statistical and clinical significance. Unclear RoB only if baseline descriptions were omitted or were too sparse to evaluate for possible differences. If pre-post study (of a single group), Low RoB (unless there's an indication that groups differed pre- and post-intervention).
    - This domain may differ for each outcome (primarily based on whether adequate statistical adjustment was conducted).
- **Outcome assessor blinding**. Regardless of study design, was the outcome assessor blinded or were there methods to minimize biased outcome assessment? "Hard" outcomes (unambiguous, potentially like death) or outcomes based on objective measurements (e.g., laboratory measurements or governmental records, such as number quarantined) generally qualify as Low RoB, as do outcomes that are explicitly blinded. Other outcomes from observational studies are assumed to have High RoB unless otherwise indicated. Self-reported outcomes are typically High RoB unless the participants are blinded to their intervention.
    - This domain may differ for each outcome.
- **Group differences/confounders.** Did the analyses account for potential group differences or confounders, for example by multivariable adjustment or propensity score analysis? For RCTs, assume Low RoB unless there is a suggestion of a lack of similarity between groups (despite randomization). For NRCS, regardless of whether groups were similar at baseline, High RoB if they did not adjust for potential differences or if they adjusted only for something minor or insufficient (e.g., only sex across disparate populations). For pre-post studies, Low RoB (unless there is an indication that groups differed pre- and post-intervention).

    - This domain may differ for each outcome.
- **Other** important limitations per data extractor or as reported by study authors.
    - This domain may differ for each outcome.

Appendix B – Non-Pharmaceutical Interventions

Miyaki, K; Sakurazawa, H; Mikurube, H; Nishizaka, M; Ando, H; Song, Y; Shimbo, T. 2011. An effective quarantine measure reduced the total incidence of influenza a H1N1 in the workplace: Another way to control the h1n1 flu pandemic. *Journal of Occupational Health* 53(4):287-292. PMID 21597235

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Quasi-cluster RCT	None	Japan	Kanagawa Prefecture	H1N1 flu season	2009-10

Studied entities and populations

- **Entities enrolled**: Employed population
  - Employees of 2 major car factories
- **Target population**: General population
  - Employees and their families (and by extension, society at large)
- **Deliverer/Implementer**: Corporations
  - 2 major car factories

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
To evaluate the effectiveness of a non-vaccine quarantine measure against pandemic influenza A H1N1 in workplaces.	• Influenza incidence (of employees)	• Stay home requests • Stay home refusals • Family members with ILI • Family members with H1N1 infection • Death	Overlapping

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Stay home order	Ask employees whose co-habiting family members developed influenza-like illness (ILI) to stay home. Those with ILI were ordered to stay home. Paid leave.	Flu season	Company	Being a member of a household with a flu case is the largest single risk factor for being infected oneself. Feasible quarantine measure	• Behavioral
Control group	Reported to work as usual	Flu season	Company	Control group	• None

Non-Pharmaceutical Interventions

Miyaki et al. 2011 PMID 21597235 453-Miyaki-2011.pdf

Intervention, detailed

- Stay home request
  - Factory 1: 6634 employees
  - Ask employees whose co-habiting family members developed influenza-like illness (ILI) to stay home for 5 days after ILI symptoms resolved or 2 days after fever. Definition of ILI reported in article.
  - Daily, the factory's health management department checked for ILI symptoms or fever (implicitly in all 6634 employees). Employees with ILI symptoms ordered to stay home. Industrial physicians adjudicated unclear cases. Rules for canceling the stay-home order are reported in article. Fast-diagnosis kit results were not sufficient to cancel stay-home order; a definitive non-influenza diagnosis was needed.
  - Paid leave.
- Control group
  - Factory 2: 8500 employees
  - Reported to work as usual, regardless of family members' illness.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Stay home order	Daily monitoring of all employees, paid leave of (5% of) healthy employees for about a week	Employees and employers not given options	Not discussed	Willingness of companies to organize and pay for	High (0% refused)	Only employed people (and their families) involved Employees 93% male	Employers, Health management department	Not discussed
Control factory	None (additional)	N/A	N/A	N/A	N/A	N/A	None	N/A

Results

Outcome	Definition	How Measured	Intervention	N Analyzed	Results	Units	Comparison
Employee H1N1 infection, %	Positive rapid test kit or clinical symptoms	Company health records (implied)	Stay home order	6634	2.85	%	**crude OR 0.89 (0.74, 1.08)***
			Control factory	8500	3.18		**adjHR 0.80 (0.66, 0.97), P=0.023†**
Stay home request	Family member w/ILI	same	Stay home order	6634	4.8	%	
Stay home refusal	Declined to follow protocol	same	Stay home order	317	0	%	
Employees with family member with ILI, %	Per protocol ILI definition	same	Stay home order	6634	4.8	%	
			Control factory	8500	11.6		
Employees with family member with ILI who developed H1N1 infection, %	Positive rapid test kit or clinical symptoms	same	Stay home order	317	15.5	%	**adjRR 2.17 (1.48, 3.18), P<0.001‡**
			Control factory	990	7.8		
Influenza death, n	Not described	same	Both groups	15,134	0		

* Calculated based on raw numbers.

† Adjusted for age, sex, BMI, and smoking status. (Article seems to conflate HR and OR.)

‡ Evaluating only those employees with family members with ILI. Not explicitly stated to be adjusted, but the crude RR is different: 1.99 (1.42, 2.78)

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
The policy of staying home on full pay reduced the overall risk of influenza H1N1 infection by about 20%. Workers who stayed home due to stay-home order were twice as likely to develop influenza themselves.	Full-paid stay-home order successful to quarantine employees	Not discussed	Leads to / requires self-sacrifice of employees with infected family members to reduce the risk of flu in the community. In this study, company bore the full expenses. Study pertains to healthy workers in Japan who were unvaccinated.	Cluster randomized, without appropriate analyses. Only a single factory per cluster. (Differences in baseline smoking and diabetes would push study results to the null.) True H1N1 infections may be undercounted due to inaccuracy of diagnostic methods used. Healthy workers were not vaccinated in 2009.	Cost-effectiveness analyses needed	

Risk of bias / Study Quality

Outcome*	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Employee infection	Low	Unclear[72]	Low	Low	Low	High[73]	Low	Low	Low[74]	No	**Moderate**
Family with ILI	Low	Unclear	Low	Low	Low	High[75]	Low	Low	High[76]	No	**Poor**
Family with H1N1	Low	Unclear	Low	Low	Low	High[75]	Low	Low	High	No	**Poor**
Influenza death	Low	Unclear	Low	High[77]	Low	Low	Low	Low	Low	No	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

* Stay home request and refusal omitted since non-comparative (between factories).

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[72] Not reported

[73] Diagnostic testing (rapid test and clinical diagnosis) may have greatly underestimated influenza infections. Although unlikely to bias toward one intervention.

[74] Study makes claim that the two cohorts (factories) had statistically similar characteristics, when this was clearly not the case. Eg, Current smoking: Intervention 46.4% vs. Control 34.4%. However, main outcome was adjusted for these dissimilar factors.

[75] Unclear where data about family members came from, but probably reported by employees.

[76] Unadjusted for baseline differences.

[77] Very underpowered for death. No deaths occurred. Not meaningful analysis (except for non-comparative result that death is rare).

Chu, CY; Li, CY; Zhang, H; Wang, Y; Huo, DH; Wen, L; Yin, ZT; Li, F; Song, HB. 2010. Quarantine methods and prevention of secondary outbreak of pandemic (H1N1) 2009. *Emerging Infectious Diseases* 16(8):1300-1302. PMID 20678330

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	China	University in northern China	Pandemic H1N1 influenza	2009

Studied entities and populations

A **Entities enrolled**: University students
- ❖ Students returning to university during H1N1 pandemic

B **Target population**: General population
- ❖ University students

C **Deliverer/Implementer**: University, Medical personnel
- ❖ University authorities
- ❖ University medical services

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Compare the effectiveness of different quarantine methods for preventing a secondary outbreak among the persons in quarantine.	Implied • Suspected H1N1 infection	(None)	Overlapping

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Share room and toilet	Share with virus-positive contact: Share room and toilet	12 day quarantine	University dorm	Quarantine option, given housing stock	• Environmental
Share toilet	Share with virus-positive contact: Share toilet, not room	12 day quarantine	University dorm	Quarantine option, given housing stock	• Environmental
No share, single	No share with virus-positive contact: 1 to a room	12 day quarantine	University dorm	Rigorous quarantine	• Environmental
No share, double	No share with virus-positive contact: 2 to a room	12 day quarantine	University dorm	Quarantine option, given housing stock	• Environmental

Non-Pharmaceutical Interventions

Chu et al. PMID 20678330 441-Chu-2010.pdf

Intervention, detailed

- History: 33 students returned from Shanghai by train. The index case had a cough during the trip. That student and 5 others had fever and influenza-like symptoms and visited the school medical services. When the outbreak was identified, a total of 202 contacts (19-23 years old) were traced and immediately quarantined in a separate dormitory. 39 students eventually tested positive for pandemic (H1N1) 2009 influenza. Among the 163 virus-negative contacts, 11 had fever (≥38°C) or influenza like symptoms; **152 were symptom-free, these are the subjects of this analysis**.
- 89 rooms (each with a toilet) and 9 apartments (each with 2 bedrooms and 1 toilet) were occupied. 1 or 2 contacts were assigned to each bedroom.
- Other control measures, such as ventilating and disinfecting each room, wearing masks, and washing hands, were strictly implemented in accordance with guidance provided by the Chinese Ministry of Health. Students with high fever (≥38.5°C) or severe cough or dyspnea were hospitalized. Influenza testing was stopped (after the first day) due to lack of resources. "Compliance of all contacts with regulations governing personal protection and hygiene was good."
- Staff were assigned to supervise the behavior of contacts in quarantine.
- Share room and toilet: Shared room and toilet with a virus-positive contact. Unclear, but implicitly the virus status was unknown at the time of room assignment.
- Share toilet: Shared a toilet, but not a room with a virus-positive contact. Unclear, but implicitly the virus status was unknown at the time of room assignment.
- No share, single: Did not share a room or toilet with a virus- positive contact. Unclear, but implicitly the virus status was unknown at the time of room assignment. 1 to a room.
- No share, double: Did not share a room or toilet with a virus- positive contact. Unclear, but implicitly the virus status was unknown at the time of room assignment. 2 to a room.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Share room and toilet	Available dormitory rooms	None. Implicitly no options offered.	Not discussed	Restricted by rooming limitations, not by student agreement to housing options	Not discussed	Not addressed	School administration and medical services	Not discussed
Share toilet	Same	Same	Same	Same	Same	Same	Same	Same
No share, single	Same	Same	Same	Same	Same	Same	Same	Same
No share, double	Same	Same	Same	Same	Same	Same	Same	Same

Results

Outcome	Definition	How Measured	Intervention	N Analyzed	Results	Units	Comparison
Suspected H1N1 infection, %	Fever or influenza-like illness (not H1N1 tested)	Medical records (implicitly)	Share room and toilet	19	26.3	%	**Share w/exposed vs. No share w/exposed (5/20 vs. 9/132): P = 0.02**
			Share toilet	1	0		
			No share, single	6	0		No share w/exposed, single vs. double room (0/6 vs. 9/126): P = 1.00
			No share, double	126	7.1		

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Sharing room or toilet with virus-positive contact significantly increased the risk of having a suspected H1N1 infection. No difference in suspected infections among those without a H1N1 contact regardless of rooming situation. "Our results support the effectiveness of quarantine in preventing a secondary outbreak of pandemic (H1N1) 2009 among contacts of confirmed cases."	Quarantining contacts of H1N1 cases.	"Control measures [beyond quarantine] did not contribute to the differences of the attack rate of suspected cases between the different cohorts."	Quarantining 2 virus-negative contacts in 1 room in situations where a large number of contacts have been traced but space is limited.	Virologic laboratory confirmation of suspected cases was not available. Thus may have underestimated the attack rate during quarantine; some secondary infections may have been associated with asymptomatic or subclinical disease.	"Quarantining >2 contacts in 1 room deserves further study"	Division into groups for analysis appears to be *post hoc*, not based on knowledge at the time of room assignments.

Non-Pharmaceutical Interventions

Chu et al. PMID 20678330 441-Chu-2010.pdf

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Suspected H1N1 infection	Low	High[78]	High[79]	Low	Low	High[80]	High[81]	High[82]	High[83]:	No	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[78] Arbitrary assignment per administrators (implied, not described).

[79] No assessment of comparison of different groups, which likely differed.

[80] Cases not confirmed.

[81] Implicitly, rooming situation dictated in part by risk of exposure.

[82] No blinding.

[83] Crude, unadjusted (but analyzed by exposure subgroups).

Non-Pharmaceutical Interventions

Jeong et al. 2016 PMID 28196409 414-Jeong-2016.pdf

Jeong, H; Yim, HW; Song, YJ; Ki, M; Min, JA; Cho, J; Chae, JH. 2016. Mental health status of people isolated due to middle east respiratory syndrome. *Epidemiol Health* 38:e2016048. PMID 28196409

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	None	South Korea	4 regions with high MERS prevalence (Seoul, Gyeonggi, Chungcheong, and Gangwon)	Middle East Respiratory Syndrome (MERS)	2015

Studied entities and populations

A **Entities enrolled**: Affected individuals
- ❖ Patients diagnosed with MERS, isolated individuals who came in contact with MERS patients (who had MERS serum epidemiological investigations done). Those "individuals with high risk of positive serum results". Prioritized as follows…
  - 0: Diagnosed with MERS
    - Verified in a laboratory diagnostic test.
  - 1: Partners, the same hospital patients, caregivers or visitors of MERS diagnosed patient with extreme likelihood of spreading disease
  - 2: Partners, the same hospital patients, caregivers or visitors of MERS diagnosed patient with likelihood of spreading disease
  - 3: Partners, the same hospital patients, caregivers or visitors of MERS diagnosed patients
  - 4: random individuals who came in contact with MERS diagnosed patients
- ❖ Positive contact was defined as an individual who, without wearing appropriate self-protective equipment such as gown, gloves, N95 mask, goggles or face mask, stayed within 2 m of a MERS patient, stayed in the same room or the ward as a MERS patient, or came in direct contact with respiratory secretions of a MERS patient
- ❖ 14,992 individuals isolated
  - 7313 lived in target areas of which 3371 were invited to participate in survey
    - Subject selection was prioritized to partners, same hospital patient, caregivers, and visitors of MERS patients residing in the target regions.
  - 1,692 individuals (50.0%) agreed to participate. (Of those who refused to participate, 65 individuals (4.8%) showed strong refusal to participate in the study with profanity and ranting, 315 individuals (23.3%) ranted in refusal to participate.)
    - 36 diagnosed with MERS during isolation
    - 1656 "not definitively diagnosed with infection"

B **Target population**: General population
- ❖ Individuals diagnosed or in contact with MERS patients

C **Deliverer/Implementer**: Not reported
- ❖ Presumably a DPH (possibly South Korea's Centers for Disease Control and Prevention)

Non-Pharmaceutical Interventions

Jeong et al. 2016 PMID 28196409 414-Jeong-2016.pdf

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Aimed to estimate the prevalence of anxiety symptoms and anger in isolated individuals due to being in contact with MERS both at isolation period and at four to six months after release from isolation. Determined the factors associated with these symptoms at four to six months after release.	• Anxiety symptoms • Anger	• Living status issues • Environmental situation issues • Social networking	4-6 months after quarantine

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Isolation	Not described	End May to mid-June 2015	Home (or hotel), workplace, or hospital	Not specifically discussed	• Behavioral

Intervention, detailed

- Isolation
    - Individuals who were verified to have direct contact during the period of 14 days were isolated for 2 weeks in the house, workplace, and hospital.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Isolation	Not discussed	Not discussed	Not discussed	Not discussed	See results. High rates of anxiety and anger	Not discussed 57% female 48% unemployed	Not discussed	Not discussed

Results

Outcome	Definition	How Measured	Timepoint	Subgroup	N Analyzed	Results	Units	Comparison
Had medical expenses due to MERS		Survey	During isolation	MERS	36	55.6	%	**P<0.001**
				No MERS	1656	11.8		
Had financial loss due to MERS	Or decrease in sales	Survey	During isolation	MERS	36	16.7	%	P=0.23
				No MERS	1656	10.5		
Had sufficient food and water		Survey	During isolation	MERS	36	63.9	%	**P<0.001***
				No MERS	1656	87.3		
Able to bathe		Survey	During isolation	MERS	36	75.0	%	
				No MERS	1656	96.6		
Had self-care products		Survey	During isolation	MERS	36	80.6	%	
				No MERS	1656	97.0		
Social networking: making phone calls		Survey	During isolation	MERS	36	86.1	%	P=0.50
				No MERS	1656	81.8		
Social networking: texting or emailing		Survey	During isolation	MERS	36	2.8	%	P=0.51
				No MERS	1656	6.7		
Social networking: using the internet		Survey	During isolation	MERS	36	5.6	%	P=0.22
				No MERS	1656	13.9		
Anxiety symptoms	7-item Generalized Anxiety Disorder Scale (GAD-7).Moderate to severe anxiety (≥10/21 points)	Survey	During isolation	MERS	36	47.2	%	NR
				No MERS	1656	7.6		
			4-6 months later	MERS	36	19.4		
				No MERS	1656	3.0		
Anger	State-Trait Anger Expression Inventory (STAXI), ≥14/40 (10 is minimum = not at all)	Survey	During isolation	MERS	36	52.8	%	NR
				No MERS	1656	16.6		
			4-6 months later	MERS	36	30.6		
				No MERS	1656	6.4		
Anxiety symptoms	GAD-7	Survey	4-6 months later	0 order priority† (MERS)	27	77.8	%	**P<0.001**
				1st order priority	514	31.7		
				2nd order priority	60	28.3		
				3rd order priority	368	22.8		

Outcome	Definition	How Measured	Timepoint	Subgroup	N Analyzed	Results	Units	Comparison
				4th order priority	63	20.6		
Anger	STAXI	Survey	4-6 months later	0 order priority† (MERS)	27	66.7	%	**P<0.001**
				1st order priority	514	18.1		
				2nd order priority	60	16.7		
				3rd order priority	368	15.2		
				4th order priority	63	6.3		

Table 4 in article (page 5) reports the RRs, separately, of anxiety symptoms and anger at 4-6 months after isolation, separately for the 36 with MERS and the other 1656 isolated individuals, based on having had 3 MERS symptoms; 3 categories of not having food, clothing, or house supplies; 3 categories of social networking; and 4 other factors.

- For the 36 individuals who had had MERS, only history of mental illness (RR 10.7; 95% CI 1.1, 109.6) and having had medical cost expenditures (RR 5.5; 95% CI 1.0, 30.7) were statistically significant predictors of anxiety symptoms (after adjusting for age and sex). None was a predictor or anger.
- For the 1656 individuals isolated without MERS, all factors (except making phone calls) were statistically significant predictors both of anxiety symptoms and of anger (after adjusting for age and sex). RRs ranged from 1.8 to 6.7 (excluding phone calls). The strongest predictors (RR >5.0) were:
    - Diarrhea (during isolation) as predictor for anxiety: RR 5.3 (3.1, 9.0)
    - Diarrhea (during isolation) as predictor for anger: RR 6.7 (3.8, 11.8)
    - History of mental illness as predictor for anxiety: RR 5.3 (2.5, 11.0)
    - Medical cost expenditures as predictor for anger: RR 5.5 (3.5, 8.5)

* Across 3 categories of "Food, clothes, and house supplies".

† See target population description.

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
People who were isolated for two weeks due to contact with MERS patients suffered from high rates of anxiety symptoms and anger during isolation, and showed mental health effects even at four to six months after removal from isolation.	Not explicitly discussed	Not all people were provided with relief items at the time of isolation, so it seems likely that anxiety symptoms and anger were largely felt when the necessary supplies for daily life were not provided at appropriate times.	"It is likely that people who were to be isolated had fears of infection and anxiety over MERS which had over a 20% mortality rate, concern over social isolation, and anxiety over the possibility of spreading infection to family members if isolated at home." "It is likely that those isolated had high levels of anxiety over the fear of their isolation becoming a stigma among their neighbors." In patients with history of psychiatric illnesses, there was a high risk of anxiety and anger at four to six months after removal from isolation. This suggests that special interventions are necessary for people with a history of psychiatric illness in traumatizing situations.	Anxiety measure may have underestimated true anxiety (based on other Korean studies). Nearly 30% of people who did not participate expressed anger through cursing or profanity.	Not discussed	Comparisons are only between different sets of quarantined people.

Non-Pharmaceutical Interventions

Jeong et al. 2016 PMID 28196409 414-Jeong-2016.pdf

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Anxiety symptoms	High[84]	None	High[85]	Unclear[86]	Low	High[87]	Low	High[88]	Low	No	**Poor**
Anger	High	None	High	Unclear	Low	High	Low	High	Low	No	**Poor**
Living status/environmental (various)	High	None	High	Unclear	Low	High[89]	Low	High	Low	No	**Poor**
Social networking (various)	High	None	High	Unclear	Low	High[89]	Low	High	Low	No	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[84] Many angry people did not participate. Survey likely a biased sample.

[85] No comparison between interventions, only between those with and without MERS.

[86] Not reported. Clearly underpowered among people with MERS.

[87] Article reports that anxiety and anger scales may not be accurate in this population.

[88] Not blinded.

[89] Inadequate description of survey questions.

Lee, SM; Kang, WS; Cho, AR; Kim, T; Park, JK. 2018. Psychological impact of the 2015 MERS outbreak on hospital workers and quarantined hemodialysis patients. *Comprehensive Psychiatry* 87:123-127. PMID 30343247

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	S Korea	Kyung Hee University Hospital at Gangdong (Seoul)	Middle East respiratory syndrome (MERS) outbreak	2015

Studied entities and populations

A **Entities enrolled**: Healthcare providers*
- ❖ 1800 Healthcare workers who treated patients with MERS
  - 359 (19%) responded to 1st survey (during hospital shutdown): Doctors 5% (were 33% of total workers), technicians 29% (10% of workers), nurses 35% (32% of workers); pharmacists 22% (2% of workers), administrative 17% (10% of workers), and others 17% (13% of workers)
  - 77 of 176 (43.8%) respondents to 1st survey who scored ≥25 on IES-R scale (PTSD "eligible, "see below) requested to participated in a 2nd survey 1 month after quarantine: Doctors 4%, technicians (9%), nurses (69%), pharmacists 4%, administrative 9%, and others (5%). Similar rates of quarantine among respondents and non-respondents.

B **Target population**: MERS exposure
- ❖ Healthcare workers exposed to MERS

C **Deliverer/Implementer**: Hospital
- ❖ Not described

* The article also reports on 73 hospital-quarantined patients exposed to MERS via hemodialysis, but these data are descriptive (noncomparative) only and are not included here.

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Assess the immediate stress and psychological impact experienced by quarantined patients undergoing hemodialysis and university hospital workers who treated patients Middle East respiratory syndrome (MERS) during its outbreak.	• Psychological distress • PTSD symptoms • Depression • Anxiety	(None)	During and 6 weeks after quarantine

Non-Pharmaceutical Interventions

Lee et al. PMID 30343247 419-Lee-2018.pdf

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantined	Home quarantine (no further description)	Not described, but hemodialysis patients underwent 7-14 days of quarantine	Home	Not discussed	• Environmental • Behavioral
Not quarantined	Not described	None	None	Not discussed	• None

Intervention, detailed

- Quarantine of hospital personnel, not described ("quarantine experience")
- No quarantine of hospital personnel, not described

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Quarantine	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Hospital, DPH (Korean Centers for Disease Control and Prevention)	Not discussed
No quarantine	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	None, presumably	Not discussed

Results

Outcome	Definition	How Measured	Subgroup	Intervention	Timepoint	N Analyzed	Results	Units	Comparison
Psychological distress, mean (SD) score	Impact of Events Scale-Revised (IES-R), score ranges from 0-88, with subscales for hyperarousal, avoidance, intrusion, and sleep and numbness	Via email and mobile devices	All healthcare personnel	Quarantine	During quarantine	92	27.0 (20.3)	Mean (SD)	NS
				No quarantine		266	26.1 (18.6)		
			PTSD "eligible" (IES-R ≥25) during quarantine	Quarantine	6 weeks later	23	28.3 (20.2)	Mean (SD)	NS
				No quarantine		54	20.7 (19.7)		
Sleep and numbness	Combined subscales of IES-R: (trouble staying asleep, felt hadn't happened or wasn't real, feelings kind of numb, trouble falling asleep, dreams)	Via email and mobile devices	PTSD "eligible" (IES-R ≥25) during quarantine	Quarantine	6 weeks later	23	NR	Mean (SD)	**P=0.03, higher (worse) among quarantined**
				No quarantine		54	NR		

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Home quarantined healthcare personnel had worse sleep and numbness symptoms 6 weeks after quarantine but no difference of overall psychological distress during quarantine. Among those healthcare personnel who had worse psychological distress during the MERS epidemic, those who were quarantined had worse "sleep and numbness" distress	Not discussed	Not discussed	Even after time has passed following the acute infection period, sleep and numbness symptoms are persistent in healthcare workers and survivors, emphasizing the importance of assessment and management.	Hospital staff response rates varied widely by job description. Self-selection bias possible among hospital staff (email, mobile device survey); poor response rate to survey, particularly 2nd survey. Poor, vague description of quarantine	Not discussed	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Psychological distress (IES-R)	High[90]	High[91]	Low	Unclear[92]	High[93]	Low	Unclear[94]	High[95]	High[96]	No	**Poor**
Sleep and numbness	High	High	Low	Unclear	High	High[97]	Unclear	High	High	No	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[90] Differential rates of responsiveness to survey among hospital staff by job description.
[91] Quarantined and non-quarantined had different risk factors and characteristics, which were unaccounted for
[92] Not reported.
[93] High loss between first and second hospital staff surveys (although no significant differences found between responders and non-responders).
[94] Not reported.
[95] No blinding.
[96] No adjustment across different groups (despite underlying differences).
[97] Ad hoc subscore, seemingly made up by researchers.

Bondy, SJ; Russell, ML; Lafleche, JM; Rea, E. 2009. Quantifying the impact of community quarantine on SARS transmission in Ontario: Estimation of secondary case count difference and number needed to quarantine. *BMC Public Health* 9:488. PMID 20034405

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	Canada	Ontario	Severe Acute Respiratory Syndrome (SARS)	2003

Studied entities and populations

A **Entities enrolled**: Exposed and contacts
- 332 "index cases" with a final disposition of suspect or probably SARS, of whom 204 had at least one community contact uniquely associated with them in Public Health records.
  - 267 not in quarantine at symptom onset, 65 in quarantine prior to symptom onset.
- 8498 unique community contacts, exposure within 10 days of case indexing.
  - Excluded healthcare workers whose only contact was through health care delivery (but included healthcare workers exposed through social or family contacts).
  - 7970 not in quarantine at symptom onset, 528 in quarantine prior to symptom onset.

B **Target population**: General population
- Community affected by quarantine

C **Deliverer/Implementer**: DPH
- Ontario Ministry of Health

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Quantitative estimates of the reduction in secondary cases attributable to quarantine. Estimate the difference in secondary transmissions that is attributable to community quarantine as the Secondary Case Count Difference (SCCD), which is comparable to risk difference (and number needed to quarantine).	• Secondary transmissions attributable to community quarantine	• Number needed to quarantine	During quarantine

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Home quarantine with monitoring	10 days after last exposure	Home	Minimize spread	• Behavioral

Bondy et al. PMID 20034405 601-Bondy-2009.pdf

Intervention, detailed

- Per Svoboda 2004 (604-Svoboda-2004.pdf): All cases of SARS were isolated and treated in a hospital. Persons with potential cases of SARS were cared for as if they had SARS until the illness was ruled out.
- Close contacts were people who cared for, lived with, or had face-to-face contact (within 1 m) with a person with SARS or direct contact with the respiratory secretions or bodily fluids of a person with SARS. Asymptomatic close contacts were instructed to stay home under quarantine for 10 days after the last exposure. They were provided support and monitored for onset of symptoms and compliance. The 10-day quarantine was extended for any contacts who had early symptoms.
    - Instructions included sleeping separately from others, using personal items (e.g., utensils and towels) exclusively (i.e., not sharing them), and wearing a mask when near household members.

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Quarantine	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	DPH, general public	Not discussed

Results

Outcome	Definition	How Measured	N Analyzed	Analysis Method	Results	Units	Comparison
Secondary transmissions attributable to community quarantine	Secondary Case Count Difference (SCCD): Average transmissions per existing case, per index case. (Similar to risk difference)	Public health records	8498	Poisson regression*	−0.133 (−0.213, −0.053)†	Cases	**P=0.001**
	Secondary Case Count Ratio: Ratio of (secondary cases per quarantined index) to (secondary cases per non-quarantined index). Treats index cases as the unit of analysis. (Similar to incident rate ratio)			Poisson regression	0.316 (0.114, 0.874)†	(ratio)	**P=0.026**
				Adjusted for total contacts and total close contacts	0.352‡ (0.127, 0.981)†		**P=0.046**
Number needed to quarantine	1/SCCD			Poisson regression	7.51 (4.68, 18.9)†	Quarantined/case	**P=0.001**

* A naïve regression model's results are also reported (NS).

† Confidence intervals (and P values) using other methods are reported.

‡ Difference between unadjusted and adjusted models suggests that the more total close contacts (Level 1: ≥30 minutes within a distance of one meter) one has the more likely one is to develop SARS during quarantine; however, the difference between the two models is not statistically significant. "Number of close contacts had some overlap with the observed (non-significant) effect of quarantine, whereas the number of more distant contacts was unrelated to any apparent benefit of quarantine."

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Use of community quarantine in the 2003 Ontario SARS outbreak reduced transmission to one-third, with an absolute difference of 0.13 secondary cases per index case under quarantine, relative to not quarantined by symptom onset.	Quarantine, but not explicitly discussed, per se	Not discussed	Existing outbreak data may yield more information to evaluate outbreak control measures than has been reported. Further thought and discussion are needed as to how meaningful a NNQ statistic might be for decision-making in outbreak planning, relative to other expressions of attributable case reductions. Studies to evaluate control measures for one agent may not be generalizable to other agents	All estimates we present for the impact of quarantine, however, are imprecise. Bootstrapped confidence intervals include values for no impact. Statistical power is a limitation to this and many analyses of real outbreak data. Poor power related to observation of real event limited and complicated statistical options. Unable to include all individuals screened by public health staff for potential quarantine and contact tracing, regardless of final disposition (including "false positive cases").	Future cost-benefit studies should include information on all people screened for quarantine. Further research, presenting quantitative differences in outcomes attributable to measures such as quarantine, would be useful in many ways. First, this would add to evidence on cost-effectiveness. Second, it would facilitate further methodological development in this field. Pooled re-analysis of existing outbreak data across several settings, would ameliorate statistical power problems, and increase the scientific contribution from these important databases.	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Secondary transmission	Low	None	Low	High[98]	Low	Low	Low	High[99]	Low	Yes[100]	**Moderate**
NNQ	Low	None	Low	High	Low	Low	Low	High	Low	Yes	**Moderate**

NNQ = number needed to quarantine.

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

[98] By its nature, study underpowered, requiring multiple analyses to estimate statistical significance, which did not all agree.

[99] No blinding (though unclear if this is relevant).

[100] Article discusses measurement errors, but unclear if this was a major concern regarding the conclusions.

Adler, AB; Kim, PY; Thomas, SJ; Sipos, ML. 2018. Quarantine and the U.S. Military response to the Ebola crisis: Soldier health and attitudes. *Public Health* 155:95-98. PMID 29331771

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	US (Military)	Military base (Return from West Africa)	Ebola	2014

Studied entities and populations

A **Entities enrolled**: US military personnel
- ❖ Returning service members from West Africa who were put into community quarantine on base
- ❖ U.S. soldiers from four different quarantine cohorts provided their informed consent (75.9%, N = 501) and completed anonymous surveys during the last three days of quarantine.

B **Target population**: US military personnel
- ❖ Same

C **Deliverer/Implementer**: US military
- ❖ Command

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Document the mental health and attitudes of soldiers in quarantine. Examine the role of family in adjusting to quarantine. Assess the relationship between health-promoting leadership behaviors and soldier adjustment to quarantine.	• "Mental health and attitudes"	(No additional)	Last 3 days of quarantine

Non-Pharmaceutical Interventions

Adler et al. 2018 PMID 29331771 354_Adler-2018-Quarantine and the U.S. military re.pdf

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Controlled monitoring areas (CMA)	Isolated areas with controlled access on US military bases. All participants received this intervention.	21 day quarantine	US military bases	Quarantine would provide an opportunity to monitor symptoms of common non-Ebola diseases such as traveler's diarrhea or respiratory disease that may mirror early Ebola symptoms. Established quarantine system would reduce community [non-military] anxiety.	• Behavioral
Health-promoting leadership behaviors	Team leader promoted health-promoting behaviors, as reported by military personnel	21 day quarantine	US military bases	Implicitly, this leadership would be hypothesized to increase compliance with health-promoting behaviors.	• Behavioral
No health-promoting leadership behaviors	Team leader did not promote health-promoting behaviors, as reported by military personnel	21 day quarantine	US military bases	Comparator	•

Intervention, detailed

- CMA (quarantine)
  - 21-day quarantine in CMAs after returning from Ebola "hot zone".
  - Isolated areas with controlled access on U.S. military bases. Service members were restricted to these areas and provided basic necessities, even recreational and educational opportunities.
  - Direct contact with others was limited. CMA staff remained behind designated lines to maintain appropriate separation, and personal protective equipment was used when closer contact was required.
  - Service members had to monitor their temperature twice a day.
  - The rest of the time, they either had military-related classes or were free to schedule their own activities. CMA conditions varied by location and as a function of the direction provided by the local senior leaders.
- Health-promoting leadership behaviors
  - Based on survey respondents' agreement that their leaders emphasized the following behaviors during quarantine.
    - Emphasize taking care of yourself physically, Emphasize maintaining professional standards, Place command emphasis on importance of preventive medical measures, Emphasize taking care of yourself mentally, Lead by example by using preventive medical measures themselves, Encourage Soldiers to remind each other to use preventive medicine measures, Emphasize the importance of the humanitarian mission , Encourage you to get enough sleep, Remind you to take a break/recharge, Give you positive feedback about your accomplishments, Reduce tension in the team/unit when emotions run high, Give you specific guidance on how to improve, Emphasize maintaining compassion.

Non-Pharmaceutical Interventions

Adler et al. 2018 PMID 29331771 354_Adler-2018-Quarantine and the U.S. military re.pdf

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
CMA	Not described. Cordoned off areas of military bases. Article Conclusion: "Planning and implementing controlled monitoring is resource intensive in terms of personnel and infrastructure."	Not discussed	Not discussed	Implemented successfully	Generally acceptable	Not discussed	None (implicitly)	Not discussed

Results

Predictor	Outcome	Definition	How Measured	N Analyzed	Results	Units
	PTSD	Per undefined scale	NR (survey)	≤501	2.4	%
	Depression	Per undefined scale	NR (survey)	≤501	0.6	%
	Anxiety	Per undefined scale	NR (survey)	≤501	1.0	%
	PTSD, depression, or anxiety	Per undefined scale	NR (survey)	≤501	3.2	%
	CMA is understandable?	Survey question	Survey	488	63.5	% strongly agree/agree
	CMA is a good idea?	Survey question	Survey	489	42.7	% strongly agree/agree
	Taking our temperature twice a day makes sense to me / is a waste of time	Survey question	Survey	489	70.3/15.3	% strongly agree/agree
"Health-promoting leadership behaviors"[101]	PTSD	Survey question	Survey	~489	NS	
	Depression	Survey question	Survey	~489	−0.03 (P=0.04)	b (model slope) [fewer symptoms]
	Anxiety	Survey question	Survey	~489	-0.04 (P=0.008)	b (model slope) [fewer symptoms]
	Insomnia	Survey question	Survey	~489	NS	
	Functional impairment	Survey question	Survey	~489	-0.02 (P=0.03)	b (model slope) [fewer symptoms]
	Positive attitude toward quarantine	Survey question	Survey	~489	0.22 (P<0.001)	b (model slope) [more positive]
	Positive attitude toward preventive medicine measures	Survey question	Survey	~489	0.07 (P<0.001)	b (model slope) [more positive]

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Health-promoting leadership behaviors were associated with positive attitudes and mental health adjustment, even after controlling for generally good leadership. Quarantine was viewed as serving a broader purpose related to allaying community anxiety rather than primarily managing a health threat. Family support was associated with both positive attitudes and mental health adjustment [No substantiating evidence was reported.] Depending on how the quarantine is justified and how families and leaders respond, affected individuals can adjust successfully.	Leaders encouraging self-care, preventive medicine measures, professionalism, and emotion regulation.	Not described	The group's expectation that they would be placed in quarantine may have influenced positive attitudes toward the CMA. The unit-based atmosphere, the relatively innocuous quarantine environment, and the occupational context [US military] also likely played a role. Health-promoting leadership behaviors can be used to guide leaders confronted with responding to quarantines associated with infectious disease outbreaks in the future, both in and outside of the military context. Professionals may not necessarily balk at the concept of quarantine.	US military post-deployment: the extent to which these findings apply to other groups of professionals who might be quarantined after responding to an infectious disease outbreak is not clear.	Not discussed	

[101] It was not reported which variable(s) exactly were entered into models. Models adjusted for rank and general leadership ratings.

Risk of bias / Study Quality

Outcome*	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Psychological outcomes (various)	Low	None	High[102]	Unclear[103]	Low	High[104]	Low	High[105]	High[106]	No	Poor
Attitudes (various)	Low	None	High	Unclear	Low	High	Low	High	High	No	Poor

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

* Descriptives (simple percentages of soldiers with symptoms or their responses to survey questions) omitted here.

[102] Predictor (Health-promoting leadership behaviors) described, but unclear how it was analyzed in the model and what it means as an overall predictor.
[103] Not reported
[104] Survey methods and validation of outcomes not described or validated.
[105] No blinding.
[106] Apparently adjusted only for rank.

Hawryluck, L; Gold, WL; Robinson, S; Pogorski, S; Galea, S; Styra, R. 2004. SARS control and psychological effects of quarantine, Toronto, Canada. *Emerging Infectious Diseases* 10(7):1206-1212. PMID 15324539

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	None	Canada	Ontario	Severe Acute Respiratory Syndrome (SARS)	2003

Studied entities and populations

A **Entities enrolled**: Quarantined
- ❖ Those placed in quarantine during the SARS outbreaks in Toronto
- ❖ Web-based survey announced through media releases, including locally televised interviews with the principal investigators.
- ❖ 68% healthcare workers

B **Target population**: General population
- ❖ Potentially exposed to SARS, subject to quarantine

C **Deliverer/Implementer**: Government
- ❖ Government mandated quarantine

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Assess the level of knowledge about quarantine and infection control measures of persons who were placed in quarantine Explore ways by which these persons received information Evaluate the level of adherence to public health recommendations Understand the psychological effect on quarantined persons	• Psychological impact of quarantine (PTSD and depression symptoms)	• Knowledge about quarantine • Adherence to quarantine	"After participants ended their period of quarantine"

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Stay at home without visitors, voluntary	10 days (median, IQR 8-10)	Home	Separate persons potentially exposed to an infectious agent (and thus at risk for disease) from the general community.	• Behavioral

Intervention, detailed

- Instructed not to leave their homes or have visitors. Wash hands frequently, wear masks when in the same room as other household members, do not share personal items (e.g., towels, drinking cups, or cutlery), and sleep in separate rooms
- Instructed to measure their temperature twice daily.
- Also undescribed work quarantine for healthcare workers (34%)
- Survey:
  - Completed by 129 (<0.9%) of >15,000 eligible persons who were placed into quarantine
  - Web-based
  - 152 multiple choice and short answer questions (~20 minutes). No data about validation, overall.
  - Included the Impact of Event Scale-Revised (IES-R) and the Center for Epidemiologic Studies-Depression Scale (CES-D)
  - Median 36 days (IQR 10-66) post-end of quarantine

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Quarantine	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed

Results

Outcome	Definition	Predictor/Comparison	How Measured	N Analyzed	Results	Units
Knowledge: Prevent transmission	Understood that they were quarantined to prevent them from transmitting infection to others		Survey	129	68	%
Knowledge: Protect themselves	Believed they were quarantined to protect themselves from infection		Survey	129	8.5	%
Knowledge: Reason for quarantine	Correct understanding of reason for quarantine	Notified of need for quarantine by media or workplace (vs. healthcare provider or public health unit)	Survey	129	P=0.04, favoring media or workplace	
Opinion: Information	Received inadequate information about SARS		Survey	129	“Nearly 30”	%
Adherence: Mask	Wore a mask in the presence of household members		Survey	129	85	%
Adherence: Inside	Remained inside their residence for the duration of their quarantine		Survey	129	58	%
Adherence: Temperature monitoring	Monitored temperature as recommended		Survey	129	67	%
Adherence: No monitoring	Did not measure their temperature at all		Survey	129	7	%

continued

Results, continued

Outcome	Definition	Predictor/Comparison	How Measured	N Analyzed	Results	Units
Adherence (all)		Healthcare workers vs. nonhealthcare workers	Survey	129	NS	
PTSD symptoms	Impact of Event Scale – Revised (IES-R) Measures symptoms of PTSD Maximum (worst) = 88		Survey	129	15.2 (17.8)	Mean (SE)
		Home vs. work quarantine			14.1 vs. 17.6 (P=0.33)	Mean
		<10 d vs. ≥10 d quarantine			11.7 vs. 23.2 (P=0.05)	
		Wore mask All the time vs. Per recommendation vs. Never			29.7 vs. 14.1 vs. 12.3 (P=0.003)	
		Income (CAD) <$40K vs. 40-75K vs. >75K			24.2 vs. 19.9 vs. 11.8 (P=0.03)	
	≥20 (the mean score of war journalists in another study)				28.9	%
Depression symptoms	Center for Epidemiologic Studies—Depression Scale (CES-D) Maximum (worst) = 60		Survey	129	13.0 (11.6)	Mean (SE)
		Home vs. work quarantine			12.0 vs, 15.2 (P=0.16)	Mean
		<10 d vs. ≥10 d quarantine			11.2 vs. 17.0 (P=0.07)	
		Wore mask All the time vs. Per recommendation vs. Never			25.6 vs. 12.2 vs. 11.5 (P=0.002)	
		Income (CAD) <$40K vs. 40-75K vs. >75K			18.3 vs. 15.5 vs. 10.9 (P=0.05)	
	≥16 (similar symptoms to clinically depressed)				31.2	%

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
A substantial proportion of quarantined persons are distressed, as evidenced by the proportion that display symptoms of PTSD and depression as measured by validated scales. Increasing symptoms of both PTSD and depression as the combined annual income of the respondent household fell from CAD >$75,000 to CAD <$40,000. Strictly adhering to infection control measures, including wearing masks more frequently than recommended, was associated with increased levels of distress.	Not discussed	Not discussed	Quarantined persons with a lower combined annual household income may require additional levels of support. A combination of lack of knowledge, an incomplete understanding of the rationale for these measures, and a lack of reinforcement from an overwhelmed public health system were likely contributors to poor adherence to infection control measures. Public health officials, infectious diseases physicians, and psychiatrists and psychologists need to be made aware of this issue [risk of distress].	This survey may underestimate the prevalence of psychological distress in the overall group of quarantined persons (Web based). <1% of quarantined participated in survey, with possible self-selection of those with greater distress.	A study design ensuring a more representative selection of the population that used a combination of quantitative and qualitative methods, including structured diagnostic interviews, would be recommended. A matched control group of persons who were not quarantined should be considered. Future studies should assess persons for other psychological responses, including fear, anger, guilt, and stigmatization.	

Risk of bias / Study Quality

Outcome*	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Knowledge: Reason for quarantine (predictor: how notified)	High[107]	None	Low	High[108]	Low	Low	Unclear[109]	High[110]	High[111]	No	Poor
Adherence (healthcare vs non-healthcare workers)	High	None	Low	High	Low	Low	Unclear	High	High	No	Poor
PTSD symptoms	High	None	Low	High	Low	Low	Unclear	High	High	No	Poor
Depression symptoms	High	None	Low	High	Low	Low	Unclear	High	High	No	Poor

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

* Descriptives (percentage of participants responding to given survey questions) omitted here.

[107] Report of possible self-selection of those with greater distress.
[108] Not discussed, but small sample (<1% of quarantined).
[109] Not described.
[110] No blinding.
[111] Crude comparison only.

Non-Pharmaceutical Interventions

Reynolds 2008 PMID 17662167 425-Reynolds-2008.pdf

Reynolds, DL; Garay, JR; Deamond, SL; Moran, MK; Gold, W; Styra, R. 2008. Understanding, compliance and psychological impact of the sars quarantine experience. *Epidemiology & Infection* 136(7):997-1007. PMID 1766216

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	None	Canada	Durham Region (suburb of Toronto)	Severe Acute Respiratory Syndrome (SARS)	2003

Studied entities and populations

A **Entities enrolled**: Quarantined
- ❖ 4199 placed into quarantine. 1950 eligible. 1057 completed survey (54.2%)
  - ▪ All community-living adults aged ≥18 years who were placed into quarantine, remained well, and were followed for at least two full days by the DRHD were eligible.
  - ▪ 13 individuals were excluded to whom legal orders were issued owing to known or threatened non-compliance.

B **Target population**: General population
- ❖ Community affected by quarantine

C **Deliverer/Implementer**: DPH
- ❖ Ontario Ministry of Health
- ❖ Durham Region Health Department (DRHD)

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
In a cohort of adults quarantined during the SARS outbreak of 2003, describe their understanding of the rationale for quarantine, difficulties, compliance and the psychological impact of the quarantine experience.	• Psychological impact (PTSD and subscales)	• Knowledge about quarantine • Loss of income	6 months after quarantine

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Home or work quarantine with monitoring	Mean (range) 8.3 days (2-30), per survey respondents Mean (range) 5.2 days (2-10), per DRDH database	Home	Prevent transmission	• Behavioral

Non-Pharmaceutical Interventions

Reynolds 2008 PMID 17662167 425-Reynolds-2008.pdf

Intervention, detailed

- Quarantine
  - Provided with masks, thermometers (if necessary) and instructions about quarantine requirements (details in article Appendix). Supplies delivered to the individual's residence.
  - Quarantined individuals were contacted daily to assess compliance and to monitor for symptom development.
  - Although considered "voluntary" noncompliant received a home visit on behalf of the Health Department (e.g. emergency medical personnel, police, public health inspector, agency volunteer) and/or was issued a legal order.
  - Two distinct but inter-linked phases of SARS activity occurred, separated by about 3 weeks of unrecognized SARS activity.
    - The two period were examined separately owing to knowledge and experience gained as the outbreak progressed (Data not extracted here).
      - SARS1 is 21 March–20 May 2003
      - SARS2 is 21 May–24 June 2003
  - Work quarantine allowed HCW to leave their home to attend their place of work but required a private vehicle for transportation and N95 masks to be used consistently at work
- Questionnaire assessed respondents' understanding of the rationale for quarantine, quarantine behaviors (including difficulties and compliance), as well as socioeconomic and psychological impacts
  - Validation or survey development were not described.

Results

Outcome	Definition	Predictor/Comparison	How Measured	N Analyzed*	Results	Units
Knowledge: Protects self	Understanding of rationale for quarantine: protects self (incorrect)		Survey	981	56.6	%
Knowledge: Protects household	Understanding of rationale for quarantine: protects household (correct)		Survey	973	48.3	%
Knowledge: Protects community	Understanding of rationale for quarantine: protects community (correct)		Survey	1001	81.8	%
PTSD symptoms	Impact of Event Scale – Revised (IES-R) Measures symptoms of PTSD Maximum (worst) = 88		Survey	1014	8.9 (8.1-9.8)	Mean (95% CI)
		HCW vs. Non-HCW†			12.5 vs. 7.6 (P<0.001)	
					3.38 (P=0.002)	Beta‡
		No. days in quarantine			0.40 (P=0.012)	
	Score ≥20				14.6	%
		HCW vs. Non-HCW†			22.4 vs. 11.8 (P<0.001)	
Avoidance subscale					0.5 (0.4-0.5)	Mean (95% CI)
		HCW vs. Non-HCW†			0.6 vs. 0.4 (P<0.001)	
Intrusion subscale					0.4 (0.4-0.5)	
		HCW vs. Non-HCW†			0.7 vs. 0.4 (P<0.001)	
Hyperarousal subscale					0.4 (0.3-0.4)	
		HCW vs. Non-HCW†			0.5 vs. 0.3 (P<0.001)	
Loss of income		HCW vs. Non-HCW†		985	31.9 vs. 25.9 (P<0.05)	%

* N's were not reported. These numbers are based on reported numerators and percentages.
† Type of quarantine (home vs. work) did not provide additional information above HCW status.
‡ From multivariable linear regression.

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Overall, perceived increased difficulty, perceived longer time in quarantine, HCW status, and increased compliance were associated with increased PTSD symptoms as measured by higher IES-R scores.	Not explicitly discussed	Not explicitly discussed	Compliance can be improved, probably through improved knowledge about the relevant disease and ensuring a greater understanding of the rationale for quarantine measures. Several considerations as identified in this study should be addressed. These include providing a clear rationale to quarantined individuals, minimizing the duration of quarantine, and paying special attention to high risk groups (e.g. HCW and persons immediately affected by the disease). Revised requirements and improved preparation/education of those placed into quarantine may better limit the psychological impact of the quarantine experience.	Response rate was [only] 55% and younger persons were under-represented	Methods to improve the rapid delivery of information, and other methods to improve compliance need to be explored.	

Risk of bias / Study Quality

Outcome*	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
PTSD symptoms (and subscales)	High[112]	None	Low	Low	Low	High[113]	Unclear[114]	High[115]	High[116]	No	Poor
Loss of income	High	None	Low	Low	Low	High	Unclear	High	High	No	Poor

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

* Descriptives (percentage of participants responding to given survey questions) omitted here.

[112] Arguably low response rate (55%); younger people under-represented.
[113] Study notes high potential of recall bias 6 months after quarantine.
[114] Not described.
[115] No blinding.
[116] Crude comparison only.

Non-Pharmaceutical Interventions

Kavanagh 2011	PMID 21199583	416-Kavanagh-2011.pdf
McVernon 2011	PMID 21958428	423-McVernon-2011.pdf
Kavanagh 2012	PMID 23164090	417-Kavanagh-2012.pdf

Kavanagh, AM; Bentley, RJ; Mason, KE; McVernon, J; Petrony, S; Fielding, J; LaMontagne, AD; Studdert, DM. 2011. Sources, perceived usefulness and understanding of information disseminated to families who entered home quarantine during the H1N1 pandemic in Victoria, Australia: A cross-sectional study. *BMC Infectious Diseases* 11:2. PMID 21199583
McVernon, JK Mason, K; Petrony, S; Nathan, P; LaMontagne, AD; Bentley, R; Fielding, J; Studdert, DM; Kavanagh, A. 2011. Recommendations for and compliance with social restrictions during implementation of school closures in the early phase of the influenza a (H1N1) 2009 outbreak in Melbourne, Australia. *BMC Infectious Diseases* 11:257. PMID 21958428
Kavanagh, AM; Mason, KE; Bentley, RJ; Studdert, DM; McVernon, J; Fielding, JE; Petrony, S; Gurrin, L; LaMontagne, AD. 2012. Leave entitlements, time off work and the household financial impacts of quarantine compliance during an H1N1 outbreak. *BMC Infectious Diseases* 12:311. PMID 23164090

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Cross-sectional (post-intervention)	None	Australia	Victoria	Pandemic H1N1 influenza	2009

Studied entities and populations

A **Entities enrolled**: Affected schools and quarantined
- 82 schools known or suspected to have implemented closures and asked children to enter quarantine
  - 33 schools met criteria and agreed to participate
- 1188 families of affected children in the 33 schools
  - 314 met criteria and responded to survey (26%), but variable numbers provided analyzable data (25%)

B **Target population**: General population
- Community affected by quarantine

C **Deliverer/Implementer**: Dept of Education, DPH, FBO
- Victoria Departments of Education and Early Child Development
- Victoria Department of Health
- Catholic Education Office (which runs the Catholic schools)

Non-Pharmaceutical Interventions

Kavanagh 2011	PMID 21199583	416-Kavanagh-2011.pdf
McVernon 2011	PMID 21958428	423-McVernon-2011.pdf
Kavanagh 2012	PMID 23164090	417-Kavanagh-2012.pdf

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Probed participants' understanding of the quarantine recommendations, the information sources used to gain this understanding, and the perceived usefulness of those sources. Analyzed whether these factors were associated with levels of compliance among families. Compared to households in which one or more parents had access to paid leave, we hypothesized that households without this access would: (i) be less likely to have a parent take time off work; (ii) be at greater risk of adverse financial consequences; and (iii) have poorer compliance with quarantine recommendations. Define household characteristics associated with differences in compliance.	• Understanding of quarantine (Kavanagh 2011) • Where obtained information (Kavanagh 2011) • Usefulness of information (Kavanagh 2011) • Compliance (McVernon 2011) • Parents taking time off work (Kavanagh 2012) • Financial loss (Kavanagh 2012)	• Subtypes of leaving home (e.g., to outdoor public space) • Subtypes of compliance (e.g., another child visited)	Survey about 6 months after quarantine

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Strict home quarantine of children, their immediate families and close contacts	May 22-June 2, 2009 Median (range) 7 (1-14) day quarantine	Home	Prevent transmission	• Behavioral

Intervention, detailed

- Home quarantine
  - Cases and their immediate family members and close contacts were asked to go into home quarantine.
  - Quarantined persons were expected to have no contact with non-household members and were treated with Oseltamivir for 10 days.
  - Cases were asked to stay in quarantine for 7 days after the onset of symptoms.
  - Contacts—defined as individuals who spent more than 4 hours in the same room as the confirmed case, or were within one meter of the confirmed case for more than 15 minutes—were asked to stay in home quarantine for 7 days from last date of exposure to the case

Non-Pharmaceutical Interventions

Kavanagh 2011	PMID 21199583	416-Kavanagh-2011.pdf
McVernon 2011	PMID 21958428	423-McVernon-2011.pdf
Kavanagh 2012	PMID 23164090	417-Kavanagh-2012.pdf

Results

Outcome	Definition	How Measured	Subgroup	N Analyzed	Results	Units	Comparison
Usefulness of Health Department as a source of information	Useful or extremely useful (Kavanagh 2011)	Survey		297 households	68.3	%	
Usefulness of School as a source of information					65.9	%	
Usefulness of Healthcare Provider as a source of information					63.0	%	
Usefulness of Media (TV/newspaper) as a source of information					38.6	%	
Usefulness of Family/Friends as a source of information					32.0	%	

continued

Non-Pharmaceutical Interventions

Kavanagh 2011 PMID 21199583 416-Kavanagh-2011.pdf
McVernon 2011 PMID 21958428 423-McVernon-2011.pdf
Kavanagh 2012 PMID 23164090 417-Kavanagh-2012.pdf

Results, continued

Outcome	Definition	How Measured	Subgroup	N Analyzed	Results	Units	Comparison
Full compliance with quarantine recommendations	Not defined (Kavanagh 2011)	Survey	All	297 households	53	%	
			Reported understood what they were meant to do during quarantine	~266 households	55	%	adjOR 2.27 (1.35, 3.80)
			Reported did not understand what they were meant to do during quarantine	~31 households	35	%	
	(among families where all resident parents were employed*) (Kavanagh 2012)	Survey	Access to sick leave	81 households	88	%	adjOR 2.07 (0.82, 5.23)
			No access to sick leave	52 households	75	%	
			Parent took time off	69 households	52.2	%	adjOR 1.27 (0.61, 2.67)
			Parent did not take time off	64 households	46.9		

Continued

* And no parent was, him- or herself, placed into quarantine.

Results, continued

Outcome	Definition	How Measured	Subgroup	N Analyzed	Results	Units	Comparison
Stayed at home, % of days	(McVernon 2011)	Survey		297 households 496 people (maybe)	94	% of days	Not associated with length of quarantine
Stayed at home throughout quarantine	(McVernon 2011)	Survey		496 people (maybe)	88	%	
				297 households	84.5	%	
	(among families where all resident parents were employed*) (Kavanagh 2012)		Parent took time off	69 households	88	%	adjOR 2.47 (1.17, 5.22)
			Parent did not take time off	64 households	77%	%	
Left home to outdoor public space	At least one quarantined family member left the home to visit "an outdoor public space with lots of other people around (e.g. playground or market)" (McVernon 2011)	Survey		297 households	8.4	%	
Left home to enclosed public space	At least one quarantined family member left the home to visit an enclosed public space, other than for medical attendance (McVernon 2011)	Survey		297 households	12.0	%	

Continued

* And no parent was, him- or herself, placed into quarantine.

Results, continued

Outcome	Definition	How Measured	Subgroup	N Analyzed	Results	Units	Comparison
Child left the home	A child spent at least one day outside the family home (McVernon 2011)	Survey		297 households	14.5	%	
Child mixed with other children	(McVernon 2011)	Survey		297 households	6.9	%	
Another child visited household during quarantine	(McVernon 2011)	Survey	Quarantined child ill	71 households	0	%	P<0.001
			Quarantined child not ill	226 households	15.9	%	
Another adult visited household during quarantine	(McVernon 2011)	Survey	Quarantined family member ill	NR	19.6	%	P=0.04
			Quarantined family member not ill	NR	33.5	%	

continued

Results, continued

Outcome	Definition	How Measured	Subgroup	N Analyzed	Results	Units	Comparison
Child cared for by non-quarantined adult	(McVernon 2011)	Survey	Compliant with child quarantine	NR	4.0	%	P<0.001
			Non-compliant with child quarantine	NR	28.3	%	
			Child ill, household compliant	NR	2.4	%	NR
			Child ill, household noncompliant	NR	44.4	%	
Compliance with oseltamivir treatment	Full drug course completed (McVernon 2011)	Survey		313 individuals	75	%	
Lost pay to care for quarantined child (among families where all resident parents were employed*)	(Kavanagh 2012)	Survey	Access to paid leave	47 households	21	%	P<0.001
			No access to paid leave	22 households	73	%	
Financial difficulty (among families where all resident parents were employed*)	Difficulty paying a bill, difficulty paying mortgage or rent, other financial problems; related to lost pay (Kavanagh 2012)	Survey		69 households	16	%	

* And no parent was, him- or herself, placed into quarantine.

Non-Pharmaceutical Interventions

Kavanagh 2011 PMID 21199583 416-Kavanagh-2011.pdf
McVernon 2011 PMID 21958428 423-McVernon-2011.pdf
Kavanagh 2012 PMID 23164090 417-Kavanagh-2012.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Families did not understand what they were supposed to do during quarantine. High levels of compliance with quarantine and antiviral recommendations were observed.	Not discussed	One third of the sample reported that information obtained from government recommendations was not useful. The costs associated with school closures are substantial. Available sick leave and parents taking time off work was not consistently associated with improved compliance.	Importance of providing clear messages about home quarantine and suggest that success in this area is likely to have a substantial impact on compliance. The quality and clarity of information from unofficial sources, particularly the media, is also important, recognizing that nearly half the households in our study used media sources but two-thirds of them did not find this information useful. Coordination between the major information sources is also essential: government should work closely with the media to facilitate consistent messages. If home quarantine of school children is implemented, the public and private sector should work to alleviate financial burdens that arise from loss of pay and financial hardship due to the need for affected parents to take time off work.	Survey delayed for 6 months after pandemic, potentially resulting in recall bias. Low response rate.	Future pandemic management may benefit from the implementation of a process to monitor in real time how communication messages are being received, thereby allowing timely analyses and amendments rather than relying on collecting information many months after the event.	

Non-Pharmaceutical Interventions

Kavanagh 2011	PMID 21199583	416-Kavanagh-2011.pdf
McVernon 2011	PMID 21958428	423-McVernon-2011.pdf
Kavanagh 2012	PMID 23164090	417-Kavanagh-2012.pdf

Risk of bias / Study Quality

Outcome*	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Usefulness of sources of information (various)	Low	None	None	High[117]	Low	High[118]	None	High[119]	Low	No	Moderate
Full compliance with quarantine	Low	None	Low	High	Low	High	Low	High	Low	No	Moderate
Stay/Left home, anyone (various)	Low	None	Low	High	Low	High	Low	High	Low	No	Moderate
Visitors (various)	Low	None	Low	High	Low	High	Low	High	Low	No	Moderate
Child care by non-quarantined	Low	None	Low	High	Low	High	Low	High	Low	No	Moderate
Lost pay	Low	None	Low	High	Low	High	Low	High	Low	No	Moderate
Financial difficulty	Low	None	Low	High	Low	High	Low	High	Low	No	Moderate

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

* Descriptives (simple percentages of children who left home, etc.) omitted here.

[117] Low response rate.

[118] Study notes high potential of recall bias 6 months after quarantine.

[119] No blinding (though of questionable applicability).

Non-Pharmaceutical Interventions

Marjanovic 2007 PMID 16618485 422-Marjanovic-2007.pdf

Marjanovic, Z; Greenglass, ER; Coffey, S. 2007. The relevance of psychosocial variables and working conditions in predicting nurses' coping strategies during the SARS crisis: An online questionnaire survey. *International Journal of Nursing Studies* 44(6):991-998. PMID 16618485

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	Canada	Ontario	Severe acute respiratory syndrome (SARS)	2003

Studied entities and populations

A **Entities enrolled**: Healthcare professionals
- 333 nurses who worked in healthcare facilities during the SARS crisis
  - 76% full time, 96% registered nurses.
  - Staff nurses (51%), managers (18%), educators (8%); public health (17%), surgical (12%), pediatrics (8%), and emergency (8%)

B **Target population**: Healthcare professionals
- Same

C **Deliverer/Implementer**: DPH
- Ontario Ministry of Health

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Examine the relationship between psychosocial variables and working conditions, and nurses' coping methods and distress in response to the severe acute respiratory syndrome (SARS) crisis. Hypothesized that greater vigor, organizational support, and trust in equipment/infection control, and less contact with SARS patients and time spent in quarantine, would predict to lower levels of emotional exhaustion, state anger, and avoidance behavior.	• Emotional exhaustion • State anger • Avoidance behavior	(None)	~1 year after quarantine (March to May 2004)

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Single survey question: whether they spent any time in quarantine as a result of their work. Differentiated work quarantine from home quarantine; however, analysis seems to have merged the two types of quarantine.	May 22-June 2 Median (range) 7 (1-14) day quarantine	Home	Prevent transmission	• Behavioral

Intervention, detailed

- Work or home quarantine, as answered by survey question

Results

Outcome	Definition	How Measured	Subgroup	N Analyzed	Results	Units	Comparison
Avoidance behavior	6 survey questions developed for this study (unvalidated): minimizing direct contact with patients, missing work, refusing patient assignments	Survey		333	1.26 (P<0.001)	adjRR	Quarantine vs. no quarantine*, adjusted for vigor, organizational support, trust, and contact
Emotional exhaustion	Maslach Burnout Inventory-General Survey (MBI-GS) emotional exhaustion subscale (validated)	Survey		333	1.08 (P=0.11)	adjRR	Same
State anger	State-Trait Anger Expression Inventory (STAXI) anger subscale (validated)	Survey		333	1.15 (0.008)	adjRR	Same

* Survey question asked about quarantine (yes/no and type), but Results section repeatedly uses the phrase "time spent in quarantine".

Table 1 in article presents Pearson product-moment correlations between quarantine and emotional exhaustion, state anger, avoidance behavior, vigor, organizational support, trust, and contact. Not extracted here.

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
For nurses, greater spent time in quarantine was predictive of higher levels of avoidance behavior and state anger. The relationship between contact and avoidance behavior was mediated through other important psychosocial and working conditions variables, such as vigor, organizational support, and time spent in quarantine.	Not discussed	Not discussed	The negative effects of contact can likely be lowered by improving perceived organizational support, promoting vigor as a proactive measure against stress, and paying special attention to nurses who are quarantined or isolated in times of crisis.	Internet survey, inadequate description of sample	Not discussed	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Avoidance behavior	Low	Low	High[120]	Low	Unclear[121]	High[122]	Low	High[123]	Low	No	Poor
Emotional exhaustion	Low	Low	High	Low	Unclear	Low	Low	High	Low	No	Poor
State anger	Low	Low	High	Low	Unclear	Low	Low	High	Low	No	Poor

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[120] Unclear whether quarantine or time of quarantine was analyzed.
[121] No description of how many nurses were sampled or how many completed the survey
[122] Unvalidated measure “developed for the purposes of the present investigation.”
[123] No blinding, but unclear of importance.

Non-Pharmaceutical Interventions

Wu 2008	PMID 18790829	433-Wu-2008.pdf
Wu 2009	PMID 19497162	432-Wu-2009.pdf
Liu 2012	PMID 21489421	421-Liu-2012.pdf

Wu, P; Liu, X; Fang, Y; Fan, B; Fuller, CJ; Guan, Z; Yao, Z; Kong, J; Lu, J; Litvak, IJ. 2008. Alcohol abuse/dependence symptoms among hospital employees exposed to a SARS outbreak. *Alcohol & Alcoholism* 43(6):706-712. PMID 18790829
Wu, P; Fang, Y; Guan, Z; Fan, B; Kong, J; Yao, Z; Liu, X; Fuller, CJ; Susser, E; Lu, J; Hoven, CW. 2009. The psychological impact of the SARS epidemic on hospital employees in China: Exposure, risk perception, and altruistic acceptance of risk. *Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie* 54(5):302-311. PMID 19497162
Liu, X; Kakade, M; Fuller, CJ; Fan, B; Fang, Y; Kong, J; Guan, Z; Wu, P. 2012. Depression after exposure to stressful events: Lessons learned from the severe acute respiratory syndrome epidemic. *Comprehensive Psychiatry* 53(1):15-23. PMID 21489421

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	China	Beijing	Severe Acute Respiratory Syndrome (SARS)	2003

Studied entities and populations

A **Entities enrolled**: Health care personnel
- ❖ 662 employees at a major Beijing hospital affected by the SARS outbreak (random sample of ~3000 employees, stratified, by job type, age, and exposure status; oversampled age 35-55 for another planned study) (analyses were weighted to make them representative of the entire hospital population)
  - 549 responded to survey: doctors 21%, nurses 38%, technicians 22%, administrative or other 20%
  - 19% had been quarantined either at home or at work

B **Target population**: Health care personnel
- ❖ Same

C **Deliverer/Implementer**: Government (presumably)
- ❖ Not described

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Examines (1) alcohol abuse/dependence symptoms among hospital employees who were exposed to a SARS outbreak, (2) the relationship between types of exposure to the SARS outbreak and subsequent alcohol abuse/dependence symptoms, (3) the relationship between post-traumatic stress (PTS) symptoms and alcohol abuse/dependence symptoms among these hospital employees, controlling for sociodemographic factors. Role of perception of SARS-related risks relating to exposure and PTS symptoms and depression symptoms	• Alcohol abuse/dependence symptoms • Post-traumatic stress symptoms • Depression symptoms	(None additional)	Survey 3 years after epidemic

Non-Pharmaceutical Interventions

Wu 2008 PMID 18790829 433-Wu-2008.pdf
Wu 2009 PMID 19497162 432-Wu-2009.pdf
Liu 2012 PMID 21489421 421-Liu-2012.pdf

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Undefined quarantine	Not reported	Unclear	Not discussed	• Behavioral
No quarantine	Undefined	None	None	Not discussed	• None

Intervention, detailed

- Quarantine
- No quarantine
    - Both based on 6 survey questions regarding reasons for quarantine

Results

Outcome	Definition	How Measured	Group	N Analyzed	Results	Units	Comparison
Alcohol symptom counts	7 symptoms, adapted from the National Household Survey on Drug Abuse (NHSDA)* (Wu 2008)	Survey	Quarantine	~103 (per "weighted percent"†	0.42 (0.93)	count (SD)	Adj Mean Ratio‡ 1.84 (1.06, 3.19)
			No quarantine	~446	0.26 (0.68)		
Post-traumatic stress symptoms	Impact of the Event Scale-Revised (IES-R) measure, ≥20/88 indicating high level of PTS symptoms, at any time during the 3 year period following the SARS outbreak (Wu 2009)	Survey	Quarantine	~103 (per "weighted percent"†	~21.6	%	OR 3.47 (1.9, 6.2) adjOR# 2.09 (1.00, 4.37) adjOR** 1.63 (0.75, 3.52)
			No quarantine	~446	~7.3		
Depressive symptoms	Center for Epidemiologic Studies Depression Scale (CES-D) score (range 0-60): ≤16 low presence of depressive symptoms 17-24 presence of depressive symptoms (not major depression); "moderate depressive symptoms" ≥25 strongly associated with major depression (Liu 2012)	Survey	Quarantine	~103 (per "weighted percent"†	≤16 61.3 17-24: 11.0 ≥25 27.7	%	≥25 vs. ≤16: adjOR# 4.90 (2.19, 11.0) adjOR†† 4.84 (1.95, 12.0)
			No quarantine	~446	≤16 80.9 17-24: 14.7 ≥25 4.4		(Also data for moderate vs. low depressive symptoms: NS)

* (a) spending a great deal of time on obtaining alcohol, (b) drinking more than intended, (c) building up a tolerance for alcohol, (d) giving up or spending less time doing important things such as working, going to school, taking care of children, doing fun things or spending time with friends or family, because of drinking, (e) drinking alcohol even

though drinking was causing one to have problems with emotions, nerves or mental health, (f) alcohol use causing or exacerbating any physical health problems and (g) wanting to cut down on alcohol use.

† To be representative of entire hospital population.

‡ Adjusted for sociodemographic factors, PTSD symptoms, and depression symptoms ("Model 4")

Adjusted for age, sex, family income, educational level, and prior exposure to traumatic events ("Model 1")

** Further adjusted for perceived SARS risk during the SARS outbreak ("Model 3")

†† Further adjusted for PTSD (sic) symptom level and current high-stress job indicator("Model 3")

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Quarantine increased the risks of alcohol symptoms, PTS symptoms, and depressive symptoms among hospital health care personnel, during the 3 years after the SARS epidemic.	Not discussed	Not discussed	Possibly, perceived SARS risk may have mediated effect of quarantine on PTS symptoms.	Cross sectional evaluation of a 3-year period of time. Recall bias possible.	Not discussed	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Alcohol symptoms	Low	None	High[124]	Low	Low	High[125]	Low	High[126]	Low	No	Poor
Post-traumatic stress symptoms	Low	None	High	Low	Low	Low	Low	High	Low	No	Moderate
Depressive symptoms	Low	None	High	Low	Low	Low	Low	High	Low	No	Moderate

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[124] Description of quarantine and information about completion of quarantine missing.

[125] Unvalidated adaptation.

[126] No blinding.

Non-Pharmaceutical Interventions

Delaporte et al. 2013 PMID 23410259 442_Delaporte-2013.pdf

Delaporte, E; Wyler Lazarevic, CA; Iten, A; Sudre, P. 2013. Large measles outbreak in Geneva, Switzerland, January to August 2011: Descriptive epidemiology and demonstration of quarantine effectiveness. *Euro Surveillance: Bulletin Europeen sur les Maladies Transmissibles = European Communicable Disease Bulletin* 18(6):07. PMID 23410259

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	Switzerland	Geneva	Measles outbreak	2011

Studied entities and populations

A **Entities enrolled**: Cases of measles
- ❖ Positive laboratory test and at least one clinical criterion of measles, or
- ❖ Met the clinical case definition and was epidemiologically linked to a laboratory-confirmed case

B **Target population**: Unvaccinated or non-immune population
- ❖ Implied

C **Deliverer/Implementer**: "Health authorities"
- ❖ Not explicitly described

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Demonstration of quarantine effectiveness	• Measles transmission	• Subgroups: within household, outside household	During epidemic

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Quarantine	18 days after last contact or onset of rash	Home	Interrupt the epidemic	• Environmental
No quarantine	No quarantine	N/A	N/A	Not described	• None

Non-Pharmaceutical Interventions

Delaporte et al. 2013 PMID 23410259 442_Delaporte-2013.pdf

Intervention, detailed

- Home quarantine
  - Extensive and rapid contact tracing of cases
  - When a case had unvaccinated or non-immune close contacts, either siblings or classmates, these were quarantined at home for 18 days after last contact or after onset of the case's rash.
  - Vaccination was recommended at the end of the quarantine period if measles had not occurred (although at least 17 close contacts received post-exposure vaccination).
  - 73 quarantined
- No quarantine
  - Not described
  - Case finding and contact tracing was identical regardless of quarantine status.
  - 173 cases; not reported how many people "should" have been quarantined per quarantine protocol

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Quarantine	Not discussed	None discussed, except that vaccination was deferred until end of quarantine to avoid discrediting vaccination (due to risk of vaccine rash)	None discussed	Unclear, particularly why non-quarantined weren't quarantined	"Compliance to quarantine was good and this measure was well accepted"	Not discussed	"Health authorities," schools, physicians. "Exclusion of children with measles was strictly enforced by school authorities"	Not discussed
No quarantine	None, implicitly	None discussed	None, implicitly	N/A	Not discussed	Not discussed	None, implicitly	Not discussed

Results

Outcome	Definition	How Measured	Timepoint	Arm	N Analyzed	Results	Units	Comparison
Transmission to new cases, total	New cases, based on cluster analysis	Not explicitly described	During epidemic	Quarantine	50* (68% of quarantined)	12	%	RR 0.26 (0.06, 0.56)
				No quarantine	173†	47	%	
Transmission within household				Quarantine	50	12	%	RR 0.43 (0.09, 1.00); P=0.051
				No quarantine	173	28	%	
Transmission outside household				Quarantine	50	0	%	RR 0.05 (0.00, 0.69)
				No quarantine	173	19	%	

* Of 73 people quarantined. 23 did not develop measles.

† No mention of the size of the relevant pool, equivalent to the 73 quarantined.

Non-Pharmaceutical Interventions

Delaporte et al. 2013 PMID 23410259 442_Delaporte-2013.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Although, as expected, the secondary attack rate among unvaccinated household members was high, quarantine of non-immunized relatives, close contacts, and classmates was very effective. The large majority (68%) of exposed non-vaccinated or non-immune persons who were quarantined developed measles, but no transmission outside their own families occurred. Even when household transmission was included, quarantine decreased the risk of transmission by 74%.	"Compliance to quarantine was good and this measure was well accepted. This may, at least in part, have been due to the support from school health services and because parents had been previously informed of this possible consequence of their refusal to have their child vaccinated. Exclusion of children with measles was strictly enforced by school authorities."	Not discussed	Not specifically discussed	Unclear size of the pool of non-quarantined who were equivalent to those who were pooled. No risk adjustment.	Not discussed	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Transmission, total	Low	High[127]	High[128]	Unclear[129]	Low	Low	Unclear[130]	High[131]	High[132]	No	Poor
Transmission, within household	Low	High	High	Unclear	Low	Low	Unclear	High	High	No	Poor
Transmission, outside household	Low	High	High	Unclear	Low	Low	Unclear	High	High	No	Poor

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[127] Unclear why people were not quarantined.

[128] No description of "no quarantine" group.

[129] Not reported.

[130] Not reported.

[131] No blinding.

[132] No adjustment between different groups.

Hsieh, YH; King, CC; Chen, CW; Ho, MS; Lee, JY; Liu, FC; Wu, YC; Wu, JC. 2005. Quarantine for SARS, Taiwan. *Emerging Infectious Diseases* 11(2):278-282. PMID 15752447

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	Taiwan	Taiwan	Severe Acute Respiratory Syndrome (SARS)	2003

Studied entities and populations

A **Entities enrolled**: SARS
- ❖ Laboratory confirmed SARS-coronavirus infection
- ❖ 24 quarantined, 451 non-quarantined (5 [1%] excluded for missing data)

B **Target population**: General population
- ❖ Implicitly. Those at risk of exposure

C **Deliverer/Implementer**: DPH
- ❖ Government. DPH implied.

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Explore whether quarantine was effective in expediting the time from onset to clinical diagnosis and hospitalization, and the time from clinical diagnosis to classification as a probable case-patient, thus contributing indirectly to prevention of possible infections.	• Onset to diagnosis time	• Diagnosis to classification time	During epidemic

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Quarantine	Quarantine	Not described	Home, implicitly	Epidemic control	• Environmental
No quarantine	No quarantine	N/A	N/A	None provided	• None

Intervention, detailed

- Quarantine
  - Placed under official quarantine for >1 day before the onset of symptoms
  - No record of close contact with others during quarantine
- No quarantine
  - Not quarantined
  - Include those whose symptoms developed on the same date or before the notification of quarantine (however, this is unclear)
  - Include those known to have had a record of close contacts with others during the supposed quarantine period were also excluded (however, this is unclear)

Non-Pharmaceutical Interventions

Hsieh et al. 2005 PMID 15752447 582-Hsieh-2005.pdf

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Quarantine	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed
No quarantine	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed

Results

Outcome	Definition	How Measured	Group	N Analyzed	Results	Units	Comparison
Onset to diagnosis interval	Time from onset of symptoms to clinical diagnosis (and hospital admission)	Laboratory data	Quarantine with SARS	24	1.20	days	Difference 1.68 (0.48, 2.89) days; P=0.0061
			No quarantine with SARS	451	2.89		
Diagnosis to classification interval	Time from clinical diagnosis to classification as a probable cause (officially confirmed)	Laboratory data	Quarantine with SARS	17	7.76	days	Difference 0.22 (−1.4, 1.8) days; P=0.79
			No quarantine with SARS	327	7.54		

Also data on different time periods related to changes in governmental policies.

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Onset to diagnosis time	Low	High[133]	High[134]	Unclear[135]	Low	Low	Unclear[136]	High[137]	High[138]	No	Poor
Diagnosis to classification time	Low	High	High	Unclear	High[139]	Low	Unclear	High	High	No	Poor

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[133] Unclear why people were not quarantined.
[134] No description of “no quarantine” group.
[135] Not reported.
[136] Not reported.
[137] No blinding.
[138] No adjustment between different groups.
[139] 28% not included.

Risk of Bias Questions

- **Study population** (eligibility criteria). Was the included sample prespecified, clearly specified, defined, and uniformly applied? Low risk of bias (RoB) if yes, High RoB if no.
    - This domain is consistent across outcomes.
- **Allocation concealment (and randomization method).** For RCTs, was there a problem with randomization method or allocation concealment? High RoB if yes, Low RoB if explicitly no problem, Unclear RoB if insufficient reporting to judge. For NRCS (of different interventions), High RoB unless analytic methods used to adequately account for inherent baseline differences in compared groups or if it is otherwise reasonable to assume that compared groups are sufficiently similar. If pre-post study (of a single group), then "None."
    - This domain is consistent across outcomes.
- **Comparator group.** Was the comparator group chosen from same population, with same general eligibility criteria, as the intervention group? For RCTs, Low RoB. For NRCS, there is overlap between this assessment and the assessment of "Allocation." If pre-post study (of a single group), Low RoB (unless there is an indication that groups differed pre- and post-intervention).
    - This domain is consistent across outcomes.
- **Sample size.** Was there a justification of the sample size or power/analysis, per outcome? High RoB if no, Low RoB if yes (and the sample size was reached) or if the analysis was statistically significant.
    - This domain may differ for each outcome.
- **Loss to follow-up.** Was there high loss to follow-up, arbitrarily set at 20%, or was there was unequal loss to follow-up between groups? This is based largely on comparisons between enrolled (or randomized) individuals and the numbers analyzed. High RoB if yes, Low RoB if no.
    - This domain may differ for each outcome.
- **Outcome measurement or ascertainment bias**. Was there a problem with how each outcome was measured? High RoB if unvalidated subjective outcome. For studies comparing different interventions, includes whether outcome was measured differently in the different intervention groups.
    - This domain may differ for each outcome.
- **Group similarity at baseline**. Were the groups (intervention and comparator) similar at baseline? If similar, Low RoB. If there is a (non-minor) difference, for each outcome was the difference statistically accounted for? Judgment of whether a difference was "non-minor" depended on both statistical and clinical significance. Unclear RoB only if baseline descriptions were omitted or were too sparse to evaluate for possible differences. If pre-post study (of a single group), Low RoB (unless there's an indication that groups differed pre- and post-intervention).
    - This domain may differ for each outcome (primarily based on whether adequate statistical adjustment was conducted).
- **Outcome assessor blinding**. Regardless of study design, was the outcome assessor blinded or were there methods to minimize biased outcome assessment? "Hard" outcomes (unambiguous, potentially like death) or outcomes based on objective measurements (e.g., laboratory measurements or governmental records, such as number quarantined) generally qualify as Low RoB, as do outcomes that are explicitly blinded. Other outcomes from observational studies are assumed to have High RoB unless otherwise indicated. Self-reported outcomes are typically High RoB unless the participants are blinded to their intervention.
    - This domain may differ for each outcome.
- **Group differences/confounders.** Did the analyses account for potential group differences or confounders, for example by multivariable adjustment or propensity score analysis? For RCTs, assume Low RoB unless there is a suggestion of a lack of similarity between groups (despite randomization). For NRCS, regardless of whether groups were similar at baseline, High RoB if they did not adjust for potential differences or if they adjusted only for something minor or insufficient (e.g., only sex across disparate populations). For pre-post studies, Low RoB (unless there is an indication that groups differed pre- and post-intervention).
    - This domain may differ for each outcome.
- **Other** important limitations per data extractor or as reported by study authors.
    - This domain may differ for each outcome.

Appendix C – Information Sharing

Information Sharing

Baseman J, et al. 2016	PMID 26690370	319_Baseman-2016-A Randomized Controlled Trial of.pdf
Baseman J, et al. 2013	PMID 23915324	320_Baseman-2013-Public health communications and.pdf
Revere D, et al. 2014	PMID 25355977	326_Mark Oberle et al-2014-Health care provider pr.pdf

Baseman, J; Revere, D; Painter, I; Oberle, M; Duchin, J; Thiede, H; Nett, R; MacEachern, D; Stergachis, A**. 2016.** A randomized controlled trial of the effectiveness of traditional and mobile public health communications with health care providers. *Disaster Medicine & Public Health Preparedness* 10(1):98-107. **PMID 26690370**

Baseman, JG: Revere, D; Painter, I; Toyoji, M; Thiede, H; Duchin, J**. 2013.** Public health communications and alert fatigue. *BMC Health Services Research* 13:295. **PMID 23915324**

Revere, D; Painter, I; Oberle, M; Baseman, J. **2014.** Health-care provider preferences for time-sensitive communications from public health agencies. *Public Health Reports* 129(6_suppl4):67-76. **PMID 25355977**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
RCT	REACH: Rapid Emergency Alert Communications in Health	US	Seattle & King County, WA; Spokane County, WA; Montana	Hypothetical	2009-12

Studied entities and populations

- **Entities enrolled**: Healthcare providers
  - Providers who might contribute to emergency preparedness and response activities and were potential first points of public contact during an emergency for information or care: primary care physicians, including family medicine, pediatrics, internal medicine, general practice, infection control, and emergency medicine specialties; nurse practitioners; physician's assistants; pharmacists; and veterinarians. N=848.
- **Target population**: General population
  - "A diverse range of population densities and demographics"
- **Deliverer/Implementer**: Academic Center, Public Health Agencies
  - Academic researchers
  - Public Health Agencies were chosen to represent a diverse range of population densities and demographics, health care workforces, potential natural hazards, and agency organizational structures.
    - It is not clear that the agencies played an active role beyond providing lists of health care providers and sample emails etc.

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Compare the effectiveness of traditional and mobile communication strategies (SMS, e-mail, and fax) for sending time-sensitive public health messages to providers (Baseman 2016). Analysis of the effects of public health message volume/frequency on recall of specific message content and effect of rate of message communications on health care provider alert fatigue (Baseman 2013). Evaluate healthcare provider preferences for receiving messages with varied levels of urgency (Oberle 2014).	• Recall of messages (Baseman 2016 & 2014)	• Access website (Baseman 2016) • Preferred mode of message delivery (Oberle 2014)	5-10 days after implementation

Information Sharing

Baseman J, et al. 2016	PMID 26690370	319_Baseman-2016-A Randomized Controlled Trial of.pdf
Baseman J, et al. 2013	PMID 23915324	320_Baseman-2013-Public health communications and.pdf
Revere D, et al. 2014	PMID 25355977	326_Mark Oberle et al-2014-Health care provider pr.pdf

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Email	Sent emails about real public health events	3-4 time-sensitive messages during 6-12 months, depending on site.	Computer (Email)	Traditional: 70% of LHDs communicate with email alerts. But can be problematic (eg, rely on staff noticing and distributing)	• Information only
Fax	Sent faxes about real public health events	Same	Office (fax)	Traditional: 57% of LHDs communicate with email alerts. But can be problematic (eg, rely on staff noticing and distributing)	• Information only
SMS	Sent text messages about real public health events	Same	Phone (text)	SMS new and untested, but HCPs increasingly commonly own phones.	• Information only
No message	Not sent messages	6 to 12 months, depending on site	None	Control	• None

HCP = health care professional, LHD = local health department

Intervention, detailed

- For 6 to 12 months, depending on site, 3 to 4 time-sensitive messages based on real events of public health interest were sent on behalf of the site's public health agency to HCPs through their allocated delivery method (319_Baseman 2016 Table 1 has list of topics)
- All messages, regardless of format, included a link to a web page with additional information on the message topic.
    - **Email**: designed to resemble those routinely disseminated by the partner public health agency at each site, conforming to each site's message layout and including health officer contacts.
    - **Fax**: designed to resemble those routinely disseminated by the partner public health agency at each site, conforming to each site's message layout and including health officer contacts.
    - **SMS (Text)**: Limited to 160 characters.
    - **No messages**

Information Sharing

Baseman J, et al. 2016 PMID 26690370 319_Baseman-2016-A Randomized Controlled Trial of.pdf
Baseman J, et al. 2013 PMID 23915324 320_Baseman-2013-Public health communications and.pdf
Revere D, et al. 2014 PMID 25355977 326_Mark Oberle et al-2014-Health care provider pr.pdf

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Email	Same as then-current messaging processes	Not discussed	Lack of email address	List maintenance may not be feasible for many public health jurisdictions	Not discussed	Enrolled HCPs serving a diverse range of population densities and demographics	Minimal (LHD can apply themselves)	Not discussed
Fax	Same as then-current messaging processes	Not discussed	Lack of fax number (or machine)	Same	Not discussed	Enrolled HCPs serving a diverse range of population densities and demographics	Minimal (LHD can apply themselves)	Not discussed
SMS (Text)	"Translation" into 160 character SMS	Not discussed	Lack of SMS-enabled phone or unknown numbers	Same	Not discussed	Enrolled HCPs serving a diverse range of population densities and demographics	Minimal (LHD can apply themselves)	Not discussed
No message	None	N/A	None	N/A	Not discussed	N/A	None	HCPs omitted

Information Sharing

Baseman J, et al. 2016 PMID 26690370 319_Baseman-2016-A Randomized Controlled Trial of.pdf
Baseman J, et al. 2013 PMID 23915324 320_Baseman-2013-Public health communications and.pdf
Revere D, et al. 2014 PMID 25355977 326_Mark Oberle et al-2014-Health care provider pr.pdf

Results

Outcome	Definition	How Measured	Intervention	N Analyzed	Results	Units	Comparison
Correct recall* (Baseman 2016)	Recall of the message topic 5-10 days later	Phone interview	Email	646	44.9	%	**OR, vs No message: 25.7 (15.8, 42.0)**
			Fax	628	37.9		**19.5 (11.9, 31.9)**
			SMS	651	37.3		**18.8 (11.4, 30.8)**
			No message	645	3.1		
							OR, Fax vs. SMS: 1.04 (0.78, 1.04) **OR, Fax vs. Email: 0.76 (0.57, 1.00†)** **OR, SMS vs. Email: 0.73 (0.55, 0.97†)**
Modifiers of recall	Every 10-year increase in provider age was associated with a 16.4% reduced likelihood of message recall. Each additional day that lapsed between the message delivery date and interview resulted in a 6.5% reduced likelihood of message recall. Accessing hyperlink increased odds of correct recall of study topic (OR 3.9; P<0.001).						
Access website (Baseman 2016)	Access hyperlink embedded in message	Web site data	Email	646	NR		P, Fax vs. Email: 0.16
			Fax	628	NR		**P, SMS vs. Fax: ≤0.001, favoring SMS**
			SMS	651	NR		**P, SMS vs. Email: ≤0.001, favoring SMS**
Correct recall, modified by No. messages received (Baseman 2013)	Adjusted correct recall,‡ by the number of weekly messages received from a listserv on any topic, 4 weeks prior and 3 weeks after each message.	Phone interview	Message any format	528 #	**Every increase of 1 message/week** resulted in a **41.2% (39, 87) decrease** in the odds of recalling the content of the study message. Not affected by provider type, gender, age, or communication channel (fax, email, SMS).		

Continued

Results, continued

Outcome	Definition	How Measured	Intervention	N Analyzed	Results	Units	Comparison
Preferred mode of message delivery (Revere 2014)	"If you had to choose one way to receive all public health advisories, what would you choose?"	Final interview at each site	All groups	690**	Email: 71.0 SMS: 18.9 Fax: 10.1	%	
	Association with covariates/characteristics				Preference rated to exposure group (email, SMS, fax), regardless of listserv membership (prior to and during study).		
	>35 vs. ≤35 year old				**Email: 72% vs. 63%, Fax: 11% vs. 6.4%, SMS: 17% vs. 31% P 0.006**		
	Female vs. male				**Email: 69% vs. 73%, Fax: 8.6% vs. 13%, SMS: 22% vs. 14% P 0.012**		
	Provider type††				**Email: Pharm preferred least (62%), Others: 70-78% Fax: MD preferred most (13%), NP least (6.4%), Others 10-11% SMS: Pharm preferred most (28%), Vet least (12%), Others 13-24% P = 0.009**		
	Number of listservs (0 vs. ≥1)				P = 0.48		
	Read email on phone vs. on computer		Email	~170	**SMS: 27% vs. 9.9%, P<0.001**		
	Alert vs. Advisories ‡‡		All groups	690**	**SMS: 18.9% vs. 7.6% (P<0.05, implied) Email: 71.0% vs. 82.9%, P<0.001** Fax: 10.1% s. 9.5% (NS, implied)		

* Per protocol analyses (regardless of whether technology failed; e.g., if no smart phone or fax number). As-treated analyses (excluding known failures) also reported.
† Corrected from typo in article.
‡ Corrected for "agreeability" by excluding (as recall) those who recalled topic only after prompting but also recalled a fake topic proposed by the researchers.
# King County, Washington site only. No message arm excluded. Of 530 meeting these criteria who were enrolled.
** Of 846 who were invited to participate in the preferences assessment.
†† Advanced registered nurse practitioner (NP), Medical doctor (MD), Physician assistant (PA), Pharmacist (Pharm), Veterinarian (Vet)
‡‡ Preferred method of receiving public health alerts and, separately, advisories.

Information Sharing

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Revere D, et al. 2014	PMID 25355977	326_Mark Oberle et al-2014-Health care provider pr.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
Messaging successful compared with no messaging, regardless of messaging approach. In 2011, email more effective to achieve correct recall about 1 week later than fax or SMS. Sex, provider type, organization type, and study site did not have significant effects on message recall (data not shown). Fax likely less effective due to message failure (no fax machine). HCPs often explore the content of the message by clicking on embedded links to access additional information sources. Additional message delivery channels may increase the potential alert fatigue in HCPs who consequently disregard critical public health messages. Email preferred communication channel, overall, for both alerts and advisories. Channel assigned to in study increased preference for that channel. Generalizable (for the time period).* SMS more preferred by younger providers, females, pharmacists, and those who read emails on their phones. However, more people prefer to receive advisories (than alerts) by email than by SMS.	All methods of messaging, possibly email more than others	Large volume of messages	HCPs do pay attention to messaged delivered by public health agencies. Familiarity with the communication channel and preference may be associated (exposure effect)	Most public health e-mail distribution lists require HCPs to opt in to receive messages. Study messages, although time-sensitive, were not emergency alerts and so may have been perceived as less important or memorable. The modality to which the HCP was randomized may have been unfamiliar or undesirable. No data on effect of messages (and of mode of messaging) on behaviors or clinical outcomes in an emergency or disaster.	New technologies and social media need to be explored for their effectiveness in disaster response, particularly social media and crowdsourcing tools and SMS. Larger randomized trials are needed that compare a variety of incrementally modified intervention conditions—variations in message preference channels, formatting of messages, and time frames of delivery—to investigate their influence on outcomes. "More systematic studies such as ours need to be conducted"	Technology preferences may be out of date (from 2011)

* "We sought to include HCPs who represented the wide variety of providers that will be included in all levels of emergency preparedness and response communications from public health agencies (local, state, territorial, and national). We included HCPs working within both urban and rural contexts and the settings of each site represented a diverse range of population densities and demographics, potential natural hazards, and varying public health agency organizational structures. We believe this combination of varied HCP roles and metro and nonmetro settings supports generalizing our findings beyond the Pacific Northwest."

Information Sharing

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Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
Correct recall	Low	Low	Low	Low	Low	Low	Low	Low	Low	No	**Good**
Access website	Low	Low	Low	Low	Low	Low	Low	Low	Low	No	**Good**
Preferred mode	Low	Low	Low	Low	Low	Low	Low	Low	Low	No	**Good**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

Information Sharing

van Woerden et al. 2007 PMID 17064456 333_Van Woerden et al-2007-Using facsimile cascade.pdf

van Woerden, HC; Evans, MR; Mason, BW; Nehaul, L**. 2007.** Using facsimile cascade to assist case searching during a q fever outbreak. *Epidemiology & Infection* 135(5):798-801. **PMID 17064456**

Study information

Study Design	Study/Program Name	Country	Location	Event	Years
Non-randomized comparative, retrospective	None	UK	Gwent, Wales	Q fever outbreak	2001-2002

Studied entities and populations

A **Entities enrolled**: Health care providers
- ❖ 106 primary care practices representing 260 primary care physicians

B **Target population**: General population
- ❖ A population of over 560,000 in the Gwent locality

C **Deliverer/Implementer**: DPH
- ❖ National Public Health Service for Wales

Research Questions / Aims	Primary Outcomes	Secondary Outcomes	Evaluation/Analysis Timing vs. Implementation
Compare whether the number of patients tested for Q fever was affected by sending faxes to PCPs about a Q fever outbreak	• CF tests for Q fever submitted	• Previously unrecognized case of Q fever	Time of intervention (faxes) through 6 weeks following (compared with same dates in prior year); and with data from 2 weeks prior to intervention.

Interventions, brief

Arm Name	Intervention, Brief	Timing (time period, frequency, duration)	Site Delivered	Rationale	Components
Fax	Fax cascade system to PCPs for case identification of Q fever	Two times fax cascade	Primary care practices (fax machines)	Electronic communication is increasingly being used in the investigation and management of disease outbreaks.	• Information only (request)

Intervention, detailed

- In mid-September 2002, several cases of Q fever among employees of a factory (in Gwent) were identified by the National Public Health Service.
- Instigated case searching for Q fever in patients presenting to local primary-care physicians in order to exclude the possibility that a larger outbreak was occurring in the community
- Used a well- established facsimile cascade system, operated on behalf of the public health department by a national telephone service provider.
- Two facsimiles were sent to all primary care practices in the Gwent locality on 2 separate days, 3 days apart.
- Physicians were asked to submit serum samples on any patient meeting a clinical case definition of Q fever and an association with the area where the outbreak appeared to be occurring.

Information Sharing

van Woerden et al. 2007 PMID 17064456 333_Van Woerden et al-2007-Using facsimile cascade.pdf

Implementation issues

Arm	Cost / Resources	Values / Preferences	Barriers	Feasibility	Acceptability	Equity	Collaboration Needs	Ethical
Fax	Minimal (faxes)	Not discussed	None discussed	Easy	Not discussed	Not discussed	DPH, PCP	Not discussed

Results

Outcome	Definition	How Measured	Timepoint	N Analyzed	Results	Units	Comparison
CF tests for Q fever submitted, n Sep 1 – Oct 31	Full time range, including pre-fax (numbers reported in text)	Centralized computer database query	Intervention year*	567,315†	212	individuals	**P<0.001**
			Prior year*	563,542†	69		
CF tests for Q fever submitted, n Sep 15 – Oct 31‡	Time period after faxes sent (weekly data) (numbers gleaned from table)	Centralized computer database query	Intervention year*	567,315†	193‡	individuals	**P<0.001‡**
			Prior year*	563,542†	53‡		
CF tests for Q fever submitted, n Sep 1 – Sep 14#	Time period before faxes sent (weekly data) (numbers gleaned from table)	Centralized computer database query	Intervention year*	567,315†	19#	individuals	NR
			Prior year*	563,542†	16#		
Previously unrecognized case of Q fever, n		Centralized computer database query	Intervention year*	567,315†	1§	individual	
			Prior year*	563,542†	NR		
"Anecdotal evidence from the laboratory suggests that although local GPs occasionally ask for an atypical pneumonia screen, including Q fever serology, they very rarely name Q fever serology directly on the request form. In contrast, in September 2002 a large number of the primary-care samples directly requested Q fever serology."							

CF = complement fixation

* 9-10/2002 (year of Q fever outbreak and fax intervention) versus 9-10/2001 (prior year without intervention).
† Locality's population in each year.
‡ Faxes sent on Sep 17 and 20. Article figure shows weekly tests. Numbers here are calculated from the table. Article states **P<0.001** for weekly and daily comparisons between 2001 and 2002.
# Prior to faxes being sent out in 2002, compared with 2001, based on article figure
§ Individual was not associated with the main outbreak, but represented a sporadic case (with recognized risk factors).

Information Sharing

van Woerden et al. 2007 PMID 17064456 333_Van Woerden et al-2007-Using facsimile cascade.pdf

Study and Review Conclusions

General conclusions	What worked	What didn't work	Implications	Limitations	Future Research	Notes from Evidence Review Team
The facsimiles sent to primary-care physicians appear to have contributed to a prompt and statistically significant increase in the number of requests for Q fever serology.	Fax request worked to increase the number of tests.	Nothing specific discussed	Information requests appear to have been heeded for Q fever outbreak	No comparison with group that did not receive faxes during the Q fever outbreak. Unclear to what degree the uptick in test requests was related to "local press statements (the same week as the faxes), local peer-group networks, and contacts with hospital staff" increasing awareness of the outbreak. Also, patient/general population awareness may have increased testing. No information on number of patients seen who met criteria for Q fever testing who were not tested. Implicitly, the Q fever outbreak ended up being self-contained. No additional cases related to the outbreak were found by testing.	This study may provide the basis for the design of future studies investigating the usefulness of facsimile for communicating with primary-care physicians.	

Risk of bias / Study Quality

Outcome	Population[A]	Allocation[B]	Comparator[C]	Power[D]	Loss[E]	Outcome[F]	Similarity[G]	Blind[H]	Adjust[I]	Other[J]	Overall assessment
CF tests for Q fever	Low	High[140]	Low	High[141]	Low	Low	Unclear[142]	High[143]	High[144]	Yes[145]	**Poor**
Previously unrecognized case of Q fever	Low	High	Low	High	Low	Low	Unclear	High	High	Yes	**Poor**

Low/Unclear/High refer to risk of bias (RoB) assessment. Yes/No refer to presence of other concerns about methodological quality. Poor/Fair/Good refer to overall assessment of the risk of bias and methodological quality of the study.

See last page of this document for the descriptions of the risk of bias topics (footnotes A-I).

[140] No attempt to adjust for underlying differences in population across years.

[141] Too few events (attendees) to complete analyses.

[142] Not reported

[143] Not blinded.

[144] Unable to account for other reasons PCPs may have requested Q tests (eg, media accounts). No comparison with concurrent PCPs without faxes.

[145] Numerous other factors may have, in part, accounted for differences between years (see "Limitations" section in Study and Review Conclusions section.

Risk of Bias Questions

- **Study population** (eligibility criteria). Was the included sample prespecified, clearly specified, defined, and uniformly applied? Low risk of bias (RoB) if yes, High RoB if no.
    - This domain is consistent across outcomes.
- **Allocation concealment (and randomization method).** For RCTs, was there a problem with randomization method or allocation concealment? High RoB if yes, Low RoB if explicitly no problem, Unclear RoB if insufficient reporting to judge. For NRCS (of different interventions), High RoB unless analytic methods used to adequately account for inherent baseline differences in compared groups or if it is otherwise reasonable to assume that compared groups are sufficiently similar. If pre-post study (of a single group), then "None."
    - This domain is consistent across outcomes.
- **Comparator group.** Was the comparator group chosen from same population, with same general eligibility criteria, as the intervention group? For RCTs, Low RoB. For NRCS, there is overlap between this assessment and the assessment of "Allocation." If pre-post study (of a single group), Low RoB (unless there is an indication that groups differed pre- and post-intervention).
    - This domain is consistent across outcomes.
- **Sample size.** Was there a justification of the sample size or power/analysis, per outcome? High RoB if no, Low RoB if yes (and the sample size was reached) or if the analysis was statistically significant.
    - This domain may differ for each outcome.
- **Loss to follow-up.** Was there high loss to follow-up, arbitrarily set at 20%, or was there was unequal loss to follow-up between groups? This is based largely on comparisons between enrolled (or randomized) individuals and the numbers analyzed. High RoB if yes, Low RoB if no.
    - This domain may differ for each outcome.
- **Outcome measurement or ascertainment bias**. Was there a problem with how each outcome was measured? High RoB if unvalidated subjective outcome. For studies comparing different interventions, includes whether outcome was measured differently in the different intervention groups.
    - This domain may differ for each outcome.
- **Group similarity at baseline**. Were the groups (intervention and comparator) similar at baseline? If similar, Low RoB. If there is a (non-minor) difference, for each outcome was the difference statistically accounted for? Judgment of whether a difference was "non-minor" depended on both statistical and clinical significance. Unclear RoB only if baseline descriptions were omitted or were too sparse to evaluate for possible differences. If pre-post study (of a single group), Low RoB (unless there's an indication that groups differed pre- and post-intervention).
    - This domain may differ for each outcome (primarily based on whether adequate statistical adjustment was conducted).
- **Outcome assessor blinding**. Regardless of study design, was the outcome assessor blinded or were there methods to minimize biased outcome assessment? "Hard" outcomes (unambiguous, potentially like death) or outcomes based on objective measurements (e.g., laboratory measurements or governmental records, such as number quarantined) generally qualify as Low RoB, as do outcomes that are explicitly blinded. Other outcomes from observational studies are assumed to have High RoB unless otherwise indicated. Self-reported outcomes are typically High RoB unless the participants are blinded to their intervention.
    - This domain may differ for each outcome.
- **Group differences/confounders.** Did the analyses account for potential group differences or confounders, for example by multivariable adjustment or propensity score analysis? For RCTs, assume Low RoB unless there is a suggestion of a lack of similarity between groups (despite randomization). For NRCS, regardless of whether groups were similar at baseline, High RoB if they did not adjust for potential differences or if they adjusted only for something minor or insufficient (e.g., only sex across disparate populations). For pre-post studies, Low RoB (unless there is an indication that groups differed pre- and post-intervention).
    - This domain may differ for each outcome.
- **Other** important limitations per data extractor or as reported by study authors.
    - This domain may differ for each outcome.

Appendix D – Quantitative Study Narrative Summaries

Community Preparedness

Coady, MH; Galea, S; Blaney, S; Ompad, DC; Sisco, S;Vlahov, D; Project Viva Intervention Working Group. **2008**. Project VIVA: A multilevel community-based intervention to increase influenza vaccination rates among hard- to-reach populations in New York City. *American Journal of Public Health* 98(7):1314-1321. **PMID 18511725**

> A non-concurrent non-randomized comparative study, in 2004-05, assessed a rapid vaccination program, with door-to-door vaccination, directed at hard-to-reach, economically disadvantaged individuals in NYC. Two separate groups of individuals were surveyed, 3747 individuals before the vaccination program was enacted and 3079 during the program. Compared to other individuals in the same communities prior to the vaccination program, those who were approached by the program were more likely to have an interest in vaccination (adjusted OR 2.69, 95% CI 2.17 to 3.33). The study was hampered by a low response to door knocking and a lack of clinical health outcome measurement. *Overall, the study (and its outcome) was deemed to be of poor methodological quality.*

Eisenman, DP; Glik, D; Gonzalez, L; Maranon, R; Zhou, Q; Tseng, CH; Asch, SM. **2009**. Improving Latino disaster preparedness using social networks. *American Journal of Preventive Medicine* 37(6):512-517. PMID 19944917

Glik, DC; Eisenman, DP; Zhou, Q; Tseng, CH; Asch SM. **2014**. Using the precaution adoption process model to describe a disaster preparedness intervention among low-income Latinos. *Health Education Research* 29(2):272-283. **PMID: 24399266**

[NB: This article was listed as "excluded by committee" but remains retained by the Brown Team. It compares two interventions and analyzes what seems to be an outcome of interest (stages of preparedness), overlapping but broader outcomes than in Eisenman 2009.]

> A randomized controlled trial, in 2007-08, compared interventions to enhance disaster preparedness in Latino households in Los Angeles County. The trial compared a program with promotoras, who provided face-to-face and further discussions about disaster preparedness (Platica group) with a media control group, in which participants received culturally competent mailings. Among those who did not have disaster preparedness plans at baseline, at 3 months after the interventions, those in the Platica group (N=54) were more likely than those in the Media group (N=71) to have a communication plan, a supply of numerous specific items (including food and water). Among all participants, those in the Platica group (N=87) were found to be at a higher stage of family communication planning than the Media group (N=100); however, no difference was found between groups for their stage of having a disaster kit. Compared with baseline, also among all participants, those in both groups were more likely to have communication plans and specific supplies at 3 month follow-up. There were some concerns about the accuracy of outcomes (social desirability bias) and generalizability of the study. *Overall, the study (and each outcome) was deemed to be of moderate methodological quality.*

Montgomery County Department of Health and Human Services. **2008**. Emergency preparedness education for the Latino community conducted by health promoters: A mini pilot project. www.cidrap.umn.edu.

A prospective pre-post study, in 2007, evaluated the Vías de la Salud training program on participant outcomes. Vías trained 6 experienced health promoters to conduct group educational sessions with Latino residents in Montgomery County, Maryland. Statistical analyses were not reported, but among the health promoters, knowledge improved from baseline immediately after their training and after the community education sessions regarding emergency plans, emergency shelters, evacuation, emergency preparation, and emergency supply kits. Except for knowledge about evacuation, promoter's knowledge (N=5-6) was stable (mostly at 100% correct) from immediately post-training until after the community education sessions. Among community members who participated in the educational sessions (N=29-39), there were improvements in whether they felt prepared and whether they had enacted a range of emergency preparedness practices. Compared with before the course, there were consistent improvements after the 2nd session and further improvements after the 3rd (and final) session). There were concerns about the validity of the study's outcomes. *Overall, the study (and each outcome) was deemed to be of moderate methodological quality.*

Eisenman DP; Bazzano, A; Koniak-Griffin, D; Tseng, CH; Lewis, MA; Lamb, K; Lehrer D. **2014**. Peer-mentored preparedness (pm-prep): A new disaster preparedness program for adults living independently in the community. Intellectual and developmental disabilities 52(1):49-59. **PMID 24635691**

A randomized controlled trial, conducted in 2007-08, compared peer-mentored emergency preparedness training (PM-Prep) with a waitlist group in a community center for adults with intellectual and developmental disabilities in Los Angeles. Compared with the control group (N≤40), at 1 month follow-up those who received the peer-mentored training (N≤42) had greater improvements on an earthquake preparedness questionnaire (P=0.003) and somewhat better about earthquake knowledge (P=0.052). There were concerns about possible cross-contamination as suggested by improvements in the earthquake preparedness questionnaire among the waitlist group. The measures were not validated and there was some concern about social desirability bias. *Overall, the study (and each outcome) was deemed to be of moderate methodological quality.*

Hites, LS; Granillo, BS; Garrison, ER; Cimetta, AD; Serafin, VJ; Renger, RF; Wakelee, JF; Burgess JL. **2012**. Emergency preparedness training of tribal community health representatives. *Journal of Immigrant & Minority Health* 14(2):323-329. **PMID 21240557**

A prospective pre-post study, conducted prior to 2012 (the manuscript submission date), evaluated the effectiveness of a culturally-adapted online training program for 83 Community Health Representatives (CHRs) in the Navajo Nation (in Arizona). The study analyzed the effect of the training on six CDC- defined bioterrorism competencies. Compared with testing prior to training, after training, the CHRs scored statistically significantly better on five of the competencies (although the median number of correct answers rose by only 1 or 2 questions (out of 1 to 7 questions per competency). There was no change in median correct answers regarding demonstrating correct use of communication equipment (0 of 1 question). The outcome was not

validated. *Overall, the study (and each outcome) was deemed to be of moderate methodological quality.*

Williams, MV; Chandra, A; Spears, A; Varda, D; Wells, KB; Plough, AL; Eisenman DP. **2018**. Evaluating Community Partnerships Addressing Community Resilience in Los Angeles, California. *Int J Environ Res Public Health* 15(4): 610. **PMID 29584681**

Bromley, E; Eisenman, DP; Magana, A; Williams, M; Kim, B; McCreary, M; Chandra, A; Wells, KB. **2017**. How Do Communities Use a Participatory Public Health Approach to Build Resilience? The Los Angeles County Community Disaster Resilience Project. *Int J Environ Res Public Health* 14(10): 1267. **PMID 29065491**

Chandra, A; Williams, MV; Lopez, C; Tang, J; Eisenman, D; Magana, A. Developing a Tabletop Exercise to Test Community Resilience: Lessons from the Los Angeles County Community Disaster Resilience Project. *Disaster Med Public Health Prep* 9(5):484-8. **PMID 26279093**

A randomized controlled trial with various apparently post hoc follow-ups and analyses that was conducted starting in 2013 to 2014 and followed for 1 to 2 years through 2015. The trial randomized existing coalitions within 16 diverse communities in Los Angeles to be trained to be either "resilience" or "preparedness" coalitions. Resilience coalitions focused on increasing community resilience to an emergency event. Preparedness coalitions focused on enhancing preparedness for possible emergency events. Across three articles, the researchers reported that both types of coalitions tended to have greater process and cooperative relationships than coordinated or integrated relationships. Process activities decreased and integrated activities increased over the first year in both coalition types. Also, both types of coalitions pursued activities focused on vulnerable populations. Resilience coalitions focused much more on trainings while Preparedness coalitions relied more on fairs ("and low-touch events"). Compared to Resilience coalitions, Preparedness coalitions pursued a more limited approach to increasing diversity, though reaching diverse communities was difficult for both types of coalitions." The articles also report on a range of outcomes related to the internal and cooperative characteristics of the coalitions, specific activities conducted, and on how members of the different coalition types performed at a tabletop exercise. The reported study was unclear about how coalitions were selected, about the randomization and allocation process, and about loss-to-follow-up (among coalition members). All reported analyses are based on crude statistics, with no or unclear statistical inference methods. The make-up of the coalitions are described as diverse without statistical adjustment, likely due to small sample size. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

McCabe OL, Semon NL, Thompson CB, Lating JM, Everly GS, Perry CJ, Moore SS, Mosley AM, Links JM. 2014a. Building a national model of public mental health preparedness and community resilience: validation of a dual-intervention, systems-based approach. *Disaster Med Public Health Prep*. **2014** Dec;8(6):511-26. **PMID 25483596**
McCabe OL, Semon NL, Lating JM, Everly GS Jr, Perry CJ, Moore SS, Mosley AM, Thompson CB, Links JM. 2014b. An academic- government-faith partnership to build disaster mental health preparedness and community resilience. *Public Health Rep*. **2014**;129 Suppl 4:96-106. **PMID 25355980**

A prospective pre-post study that examined companion training interventions—implemented though a partnership comprising an academic health center, local health departments, and faith-based organizations (FBOs)—aimed at improving mental health preparedness and community resilience. The authors used the prospective pre-post design to assess the outcomes of sequential 1-day workshops in psychological first aid (PFA) and guided preparedness planning (GPP). FBO partners recruited members of their congregation and local communities (rural and urban) to receive PFA training, and subsequently designated small teams to represent their FBO in GPP and to develop draft disaster plans for their organization and community. Statistically significant improvements were observed after the training in objectively measured knowledge, as well as self-reported knowledge, skills, and some measures of attitudes (e.g., perceived self-efficacy, willingness to deliver PFA during an emergency) for PFA and GPP trainees (including at-risk rural cohorts). On average, approximately 80 percent of teams representing their FBO submitted a same-day draft of disaster plans following GPP, with average completeness scores ranging from 83.5 to 98.7 (out of 100). At 1-year follow up, >80 percent of respondent trainees were willing and confident in their ability to provide PFA following a disaster or public health emergency, and approximately 20 percent had provided PFA at least once following a disaster or other public health emergency (nearly two-thirds had provided it to someone experiencing a personal crisis). There were concerns about measures that were not validated and about self-reporting for some outcomes. *Methodological quality was moderate for the outcomes of objectively measured knowledge and completion of disaster plans and poor for all other outcomes.*

McCabe OL, Perry C, Azur M, Taylor HG, Bailey M, Links JM. Psychological first-aid training for paraprofessionals: a systems-based model for enhancing capacity of rural emergency responses. **2011**. *Prehosp Disaster Med*. 2011 Aug;26(4):251-8. **PMID 22008099**

A cross-sectional (post-intervention) study that evaluated PFA training in a mixed cohort of FBO representatives and community residents from four rural counties in Maryland. Following the training, 97–99 percent of trainees agreed or strongly agreed that training objectives related to acquisition of knowledge about the principles and practices of disaster mental health, PFA, at-risk populations, and self-care had been met. Additionally, 93–98 percent of trainees agreed or strongly agreed that their perceived self-efficacy for applying PFA techniques in a real-world disaster setting had improved. Immediately following the workshop, 31.5 percent of trainees submitted applications to be members of the Maryland Medical Professional Volunteer Corp, indicating a willingness to respond as a PFA provider. *Methodological quality was moderate for the outcomes of stated willingness to respond and number of participants and poor for all other outcomes.*

McCabe OL, Perry C, Azur M, Taylor HG, Gwon H, Mosley A, Semon N, Links JM. **2013**. Guided preparedness planning with lay communities: enhancing capacity of rural emergency response through a systems-based partnership. *Prehosp Disaster Med*. 28(1):8- 15. **PMID 23174414**

A cross-sectional (post-intervention) study that trained FBO representatives and community members from four rural Maryland counties in GPP. Following the training, 93–98 percent of participants agreed or strongly agreed that the program objectives had been met, core planning concepts had been learned, and the course had been a valuable experience. Depending on the evaluation item, 90–100 percent of participants agreed or strongly agreed that they had a better understanding of knowledge and skills required to create a disaster mental health plan following the training. Ninety-five percent of individual participants reported enhanced confidence (perceived self-efficacy) in their ability to execute disaster planning strategies and techniques. All participants were able to generate partial disaster plan drafts by the end of the training, and by the end of the project, 15 out of 100 FBOs (all from a single county) had submitted completed disaster plans on behalf of their organizations and communities. *Methodological quality was moderate for the outcomes of local health department (LHD) new ideas for collaboration, number of participants, and completed disaster plans and poor for all other outcomes.*

Laborde DJ, Magruder K, Caye J, Parrish T. **2013**. Feasibility of disaster mental health preparedness training for black communities. *Disaster Med Public Health Prep*. 2013 Jun; 7(3):302-12. **PMID 22752411**

A cross-sectional (post-intervention) study that describes the results of a pilot disaster mental health training program, which was implemented as a train-the-trainer program tailored to black community leaders and clinical providers in rural and coastal areas of North Carolina with high poverty levels. The mean posttest knowledge score for CBO leaders was 61 percent, and individual competency scores ranged from 42 to 82 percent (pretest scores were not measured). *Overall, the study (and its outcome) was deemed to be of poor methodological quality.*

McCabe OL, Mosley AM, Gwon HS, Everly GS Jr, Lating JM, Links JM, Kaminsky MJ. **2008**. The tower of ivory meets the house of worship: psychological first aid training for the faith community. *Int J Emerg Ment Health*. 9(3):171-80.

A cross-sectional (post-intervention) study, which was a pilot of the PFA training program implemented by McCabe and colleagues (2014a, b). The study team used a train-the-trainer model to provide culturally tailored PFA training to clergy members from urban areas in Maryland with large African American and Latino populations. Self-reported self-efficacy with PFA among clergy following the training was high, ranging from 77.1 to 91.5 percent, depending on the evaluation item (e.g., accessing psychosocial and psychiatric resources, recognizing signs and symptoms of stress and acute stress disorder). *Overall, the study (and its outcome) was deemed to be of poor methodological quality*

Information Sharing

Baseman, J; Revere, D; Painter, I; Oberle, M; Duchin, J; Thiede, H; Nett, R; MacEachern, D; Stergachis, A. **2016**. A randomized controlled trial of the effectiveness of traditional and mobile public health communications with health care providers. *Disaster Medicine & Public Health Preparedness* 10(1):98-107. **PMID 26690370**

Baseman, JG: Revere, D; Painter, I; Toyoji, M; Thiede, H; Duchin, J. **2013**. *Public health communications and alert fatigue*. BMC Health Services Research 13:295. **PMID 23915324**

Revere, D; Painter, I; Oberle, M; Baseman, J. **2014**. Health-care provider preferences for time-sensitive communications from public health agencies. *Public Health Reports* 129(6_suppl4):67-76. **PMID 25355977**

> A randomized controlled trial, conducted from 2009-2012, compared (what at the time were considered) "traditional" and new (mobile) communication strategies for a Public Health Agencies to inform health providers in Washington State and Montana of time-sensitive health messages over a 6 to 12 month period. The trial compared email, fax, SMS (text), and no message. The trial investigators assessed 848 providers' recall of messages, correcting for the possibility of false recall. All messaging methods were more successful at recalling message topics than no (active) message being sent. Email was statistically significantly more effective than either fax or text, and fax and text had similar recall rates. Accessing available hyperlinks (available through all message methods) was associated with greater recall. Text messaging resulted in greater likelihood of accessing the hyperlink than either phone or fax messages. Increases in the number of messages sent to a provider were associated with decreased likelihood of correct recall of message content. Differences were found in preferred method of receiving messages, based on age, gender, provider type, and whether the provider reads emails on the phone or computer. The Committee had concerns that the comparisons being made are outdated and potentially not relevant (in part because simultaneous messages via multiple modalities are a standard). Also important, although study messages were time-sensitive, they were not emergency alerts. These concerns were not incorporated into risk of bias/methodological quality assessment. The trial had no serious methodological limitations. *Overall, the study (and each outcome) was deemed to be of good methodological quality.*

van Woerden, HC; Evans, MR; Mason, BW; Nehaul, L. **2007**. Using facsimile cascade to assist case searching during a q fever outbreak. *Epidemiology & Infection* 135(5):798-801. **PMID 17064456**

> A retrospective, non-randomized comparative study, conducted in 2001 and 2002 in Wales, evaluated whether the number of patients tested for Q fever was affected by sending faxes to primary care physicians about a Q fever outbreak. After identification of a Q fever outbreak at an urban factory, the National Public Health Service used a facsimile cascade system to alert primary care practices. Physicians were asked to submit serum samples on any patient meeting a clinical case definition of Q fever and an association with the area where the outbreak appeared to be occurring. The researchers compared the number of complement fixation tests ordered with the same dates in the prior year and the 2 weeks prior to the fax cascade. Approximately 565,000 people lived in the analyzed community. An association was found with the timing of the faxes and a quadrupling of the number of requests for complement fixation tests, in contrast with similar numbers of test requests in the prior 2 weeks (in both analyzed

years). The study had major limitations related to lack of adjustment for differences between the 2 analyzed years, and poor power. In addition, the study did not attempt to account for other factors (like local press) that may have impacted the number of tests ordered. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Non-Pharmaceutical Interventions (Quarantine)

Miyaki, K; Sakurazawa, H; Mikurube, H; Nishizaka, M; Ando, H; Song, Y; Shimbo, T. **2011**. An effective quarantine measure reduced the total incidence of influenza a H1N1 in the workplace: Another way to control the h1n1 flu pandemic. *Journal of Occupational Health* 53(4):287-292. **PMID 21597235**

A cluster "quasi-randomized" trial, conducted during an H1N1 influenza season in 2009 to 2010 in Japan, randomly assigned one automobile factory to a 2 or 5 day quarantine/stay home protocol and another factory to standard operating procedures. At the "stay home" factory (N=6634), employees were asked to stay home (with pay) if co-habiting family members had influenza-like illnesses; employees with influenza-like illnesses were ordered to stay home (with pay). In the control factory (N=8500), employees reported to work as per their normal practices. The trial found a statistically significant 20% lower odds of employees testing positive for H1N1 influenza in the stay home factory, compared with the control factory. However, employees with ill family members were twice as likely to develop H1N1 influenza in the stay home factory than the control factory. No one died of H1N1 influenza. The study was limited due to inadequate outcome measurement (use of a rapid test and clinical diagnosis may have greatly underestimated influenza infections), the study did not adjust for baseline differences in its analysis of risks to the quarantined individuals of staying home, and the study was underpowered for death. *The study was deemed to be of moderate methodological quality for the analysis of overall H1N1 infection rates, but poor methodological quality for other outcomes.*

Chu, CY; Li, CY; Zhang, H; Wang, Y; Huo, DH; Wen, L; Yin, ZT; Li, F; Song, HB. **2010**. Quarantine methods and prevention of secondary outbreak of pandemic (H1N1) 2009. *Emerging Infectious Diseases* 16(8):1300-1302. **PMID 20678330**

A retrospective non-randomized comparative study, conducted during a pandemic H1N1 influenza season in 2009 in China, compared asymptomatic, exposed students (n=152) who were assigned to different quarantine dormitory rooming situations (for 12 days) upon returning to a university. Students either shared both a room and a toilet (with other quarantined students) or shared a toilet but not a room. Students were also categorized based on whether they had (by the end of quarantine) shared toilet or room with a virus-positive contact. Rooming situations were dictated by available rooms without regard for rooming preferences. Among those who shared rooms or toilets, those who shared with virus-positive contacts were more than 3-times as likely to develop a fever or influenza-like illness (H1N1 positivity was not generally tested). The rooming situation of those not exposed to virus- positive students during quarantine was not associated with likelihood of developing a fever or illness. The study had serious methodological limitations related to how people were assigned to rooming situation, inadequate outcome assessment, lack of adjustment, among other concerns. The study did not

directly analyze the effect of different rooming situations (for all quarantined students). *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Jeong, H; Yim, HW; Song, YJ; Ki, M; Min, JA; Cho, J; Chae, JH. **2016**. Mental health status of people isolated due to middle east respiratory syndrome. *Epidemiol Health* 38:e2016048. **PMID 28196409**

A cross-sectional study (survey), conducted 4 to 6 months after a Middle East respiratory syndrome (MERS) outbreak in South Korea in 2015, compared psychological and other outcomes between people quarantined for 2 weeks who ended up having MERS and those quarantined who did not have MERS (N=1692, total). The study also compared different categories of quarantined individuals based on their degree of contact with individuals with MERS (prior to quarantine). Quarantined people with MERS reported being more likely to have medical expenses and less likely to have sufficient food and water, ability to bathe, or access to health care products during quarantine than quarantined people without MERS. The higher the category of exposure to people with MERS quarantined people had, the greater their anxiety symptoms and anger symptoms 4 to 6 months after quarantine. The study did not compare those quarantined with people not quarantined. The study authors report that the anxiety and anger scales may not be valid in this population. Notably, many angry people refused to participate in the survey. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Lee, SM; Kang, WS; Cho, AR; Kim, T; Park, JK. **2018**. Psychological impact of the 2015 MERS outbreak on hospital workers and quarantined hemodialysis patients. *Comprehensive Psychiatry* 87:123-127. **PMID 30343247**

A retrospective non-randomized comparative study (a longitudinal series of surveys), conducted during and following the Middle East respiratory syndrome (Mustafa et al.) epidemic in 2015 in South Korea, compared quarantined and non-quarantined healthcare personnel at a MERS-affected hospital. In a first survey during the MERS epidemic/quarantine period, quarantined and unquarantined healthcare personnel (N=358 respondents, total) had similar scores on the Impact of Events Scale-Revised (IES-R) scale, a measure of psychological distress. Six weeks later, a follow-up survey (N=77 respondents, total) was conducted of just those personnel who had high IES-R scores on the first survey (scoring in a range that made them “PTSD eligible”; IES-R ≥25). At 6 weeks, IES-R scores were similar among quarantined and unquarantined. However, as reported qualitatively only, in the follow-up survey of more distressed healthcare personnel, those who had been quarantined were significantly more likely (P=0.03) to have “sleep and numbness” symptoms on the IES-R scale. For both surveys, the respondents were substantially different than the non-respondents in terms of their healthcare roles; response rates varied widely by job description. Non-response rates, in particular to the follow-up survey, were high. Quarantine was not defined. The “sleep and numbness” outcome was inadequately reported and appeared to be an ad hoc measure. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Bondy, SJ; Russell, ML; Lafleche, JM; Rea, E. **2009**. Quantifying the impact of community quarantine on SARS transmission in ontario: Estimation of secondary case count difference and number needed to quarantine. *BMC Public Health* 9:488. **PMID 20034405**

A retrospective non-randomized comparative study, conducted during quarantine related to a severe acute respiratory syndrome (SARS) epidemic in Toronto in 2003, made quantitative estimates of the reduction in secondary cases attributable to quarantine and estimated the difference in secondary transmissions that was attributable to community quarantine. The study was based on information about 8498 people who were quarantined. The study estimated that the "secondary case count difference (the average transmissions per existing case, per index case; similar to risk difference) was −0.133 (95% CI −0.213, −0.053) transmitted cases (quarantined vs. unquarantined), which translated into a number needed to quarantine of 7.51 (95% CI 4.68, 18.9) quarantined per transmitted case. The adjusted secondary case count ratio (similar to the incident rate ratio) was 0.352 (95% CI 0.127, 0.981). By its nature, study underpowered, requiring multiple analyses to estimate statistical significance, which did not all agree. The article discusses measurement errors, but unclear if this is a major concern regarding the conclusions. *Overall, the study (and each outcome) was deemed to be of moderate methodological quality.*

Adler, AB; Kim, PY; Thomas, SJ; Sipos, ML. **2018**. Quarantine and the U.S. Military response to the Ebola crisis: Soldier health and attitudes. *Public Health* 155:95-98. **PMID 29331771**

A cross-sectional study (survey), conducted on a U.S. military base among soldiers returning from West Africa with possible exposure to Ebola in 2014, evaluated the association of "health-promoting leadership behaviors" by local senior leaders and about 489 soldier's mental health and attitudes to the quarantine. The study found that health-promoting leadership behaviors were, by regression, associated with less depression symptoms, anxiety symptoms, functional impairment, and more positive attitudes toward quarantine and toward preventive medicine. No statistically significant associations were found with PTSD symptoms or insomnia. The survey methods and the outcomes were not described or validated. The predictor "health promoting leadership behaviors" was based on soldiers' answers to the survey about their leaders (see Table 1 in journal article); however, it is unclear how this variable (or variables) was entered into the model. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Hawryluck, L; Gold, WL; Robinson, S; Pogorski, S; Galea, S; Styra, R. **2004**. SARS control and psychological effects of quarantine, Toronto, Canada. *Emerging Infectious Diseases* 10(7):1206-1212. **PMID 15324539**

A cross-sectional study (survey), conducted in 2003 soon after the Toronto severe acute respiratory syndrome (SARS) epidemic among 129 quarantined people, "after participants ended their quarantine period". The study found no significant difference in adherence to quarantine by healthcare workers and non-healthcare workers (no other data provided). PTSD symptoms (as measured with the Impact of Events Scale-Revised [IES-R] scale) and depression symptoms (as measured with the Center for Epidemiologic Studies—Depression Scale [CES-D]) were similar among those who underwent home and work quarantine. Those who had ≥10 days of quarantine had worse PTSD symptoms and nonsignificantly worse depression symptoms than those with <10 days of quarantine. Those who wore their mask all the time during quarantine

(against recommendations) had higher PTSD and depression symptoms than those who followed recommendations and those who never did. Worse PTSD and depression symptoms during quarantine were associated with lower income. Per the study authors, the survey may have preferentially selected those with greater distress. The survey also captured a very small sample of those quarantined(<1%). *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Reynolds, DL; Garay, JR; Deamond, SL; Moran, MK; Gold, W; Styra, R. **2008**. Understanding, compliance and psychological impact of the sars quarantine experience. *Epidemiology & Infection* 136(7):997-1007. **PMID 1766216**

A cross-sectional study (survey), conducted in 2003 6 weeks after the Toronto severe acute respiratory syndrome (SARS) epidemic among 1014 quarantined people. Compared with non-healthcare workers, healthcare workers expressed more PTSD symptoms (by Impact of Event Scale – Revised [IES-R]), greater likelihood of severe PTSD symptoms, more avoidance symptoms, intrusion symptoms, hyperarousal symptoms, and loss of income. The survey under-represented younger people. The study noted a high risk of recall bias. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Kavanagh, AM; Bentley, RJ; Mason, KE; McVernon, J; Petrony, S; Fielding, J; LaMontagne, AD; Studdert, DM. **2011**. Sources, perceived usefulness and understanding of information disseminated to families who entered home quarantine during the H1N1 pandemic in Victoria, Australia: A cross-sectional study. *BMC Infectious Diseases* 11:2. **PMID 21199583**
McVernon, JK Mason, K; Petrony, S; Nathan, P; LaMontagne, AD; Bentley, R; Fielding, J; Studdert, DM; Kavanagh, A. **2011**. Recommendations for and compliance with social restrictions during implementation of school closures in the early phase of the influenza a (H1N1) 2009 outbreak in Melbourne, Australia. *BMC Infectious Diseases* 11:257. **PMID 21958428**
Kavanagh, AM; Mason, KE; Bentley, RJ; Studdert, DM; McVernon, J; Fielding, JE; Petrony, S; Gurrin, L; LaMontagne, AD. **2012**. Leave entitlements, time off work and the household financial impacts of quarantine compliance during an H1N1 outbreak. *BMC Infectious Diseases* 12:311. **PMID 23164090**

A cross-sectional study (survey), conducted in about 6 months after pandemic H1N1 influenza in Australia in 2009 among 297 households affected by quarantine of children exposed at school. Households that reported understanding what they were meant to do during quarantine were more than twice as likely to fully comply with quarantine recommendations than those who didn't. Among families in which all resident parents were employed, those with available sick leave were (non- significantly) more than twice as likely to fully comply with quarantine recommendations and (significantly) more than twice as likely to stay home throughout quarantine. Whether parents took time off work was not associated with compliance. Households without access to paid leave were about 3 times as likely to have lost pay to care for the quarantined child. Households in which the child was not ill were much more likely to have another child visit the household than those with ill children. Similarly, households in which any family members were ill were more likely to have another adult visit during quarantine. The study noted a high risk of recall bias. The response rate was possibly low. *Overall, the study (and each outcome) was deemed to be of moderate methodological quality.*

Marjanovic, Z; Greenglass, ER; Coffey, S. **2007**. The relevance of psychosocial variables and working conditions in predicting nurses' coping strategies during the SARS crisis: An online questionnaire survey. *International Journal of Nursing Studies* 44(6):991-998. **PMID 16618485**

> A retrospective, non-randomized comparative study, evaluated 333 nurses during the severe acute respiratory syndrome (SARS) epidemic in Toronto in 2003. It was unclear whether the study evaluated quarantine, per se, or time spent in quarantine. In adjusted analyses, quarantine was associated with an unvalidated measure of avoidance behavior and state anger (by State-Trait Anger Expression Inventory [STAXI] anger subscale), but not emotional exhaustion (by Maslach Burnout Inventory- General Survey [MBI-GS] emotional exhaustion subscale). *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Wu, P; Liu, X; Fang, Y; Fan, B; Fuller, CJ; Guan, Z; Yao, Z; Kong, J; Lu, J; Litvak, IJ. **2008**. Alcohol abuse/dependence symptoms among hospital employees exposed to a SARS outbreak. *Alcohol & Alcoholism* 43(6):706-712. **PMID 18790829**

Wu, P; Fang, Y; Guan, Z; Fan, B; Kong, J; Yao, Z; Liu, X; Fuller, CJ; Susser, E; Lu, J; Hoven, CW. **2009**. The psychological impact of the SARS epidemic on hospital employees in China: Exposure, risk perception, and altruistic acceptance of risk. *Canadian Journal of Psychiatry* - Revue Canadienne de Psychiatrie 54(5):302-311. **PMID 19497162**

Liu, X; Kakade, M; Fuller, CJ; Fan, B; Fang, Y; Kong, J; Guan, Z; Wu, P. **2012**. Depression after exposure to stressful events: Lessons learned from the severe acute respiratory syndrome epidemic. *Comprehensive Psychiatry* 53(1):15-23. **PMID 21489421**

> A retrospective non-randomized comparative study, conducted 3 years after the severe acute respiratory syndrome (SARS) epidemic in Beijing in 2003 among employees at an affected major Beijing hospital (N=549). Compared with non-quarantined, those who were quarantined were more likely to have had alcohol-related symptoms, PTSD symptoms, and depression symptoms during the 3 years after the SARS epidemic. The study was unclear about the definition of quarantine. The alcohol symptom scale was unvalidated. *For PTSD and depression symptoms, the study was deemed to be of moderate methodological quality. For alcohol-related symptoms, the study was deemed to be of poor methodological quality.*

Delaporte, E; Wyler Lazarevic, CA; Iten, A; Sudre, P. **2013**. Large measles outbreak in Geneva, Switzerland, January to August 2011: Descriptive epidemiology and demonstration of quarantine effectiveness. Euro Surveillance: Bulletin Europeen sur les Maladies Transmissibles = *European Communicable Disease Bulletin* 18(6):07. **PMID 23410259**

> A retrospective non-randomized comparative study, conducted during a measles epidemic in Geneva in 2011. The study evaluated 73 people who were quarantined (without measles at the time of quarantine) and 173 people who were exposed to measles but were not quarantined. The quarantined people represented all people who met quarantine criteria and were quarantined. The non- quarantined people represented an undescribed sample of people who met quarantine criteria but were not quarantined. Non-quarantined were about 4 times more likely to transmit measles than the quarantined, including about twice as likely to transmit measles within their household. All cases of transmission outside the household were connected to the non-quarantined. The study poorly defined their analyzed samples. The characteristics of the two

samples were not compared or adjusted for. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Hsieh, YH; King, CC; Chen, CW; Ho, MS; Lee, JY; Liu, FC; Wu, YC; Wu, JC. **2005**. Quarantine for SARS, Taiwan. *Emerging Infectious Diseases* 11(2):278-282. **PMID 15752447**

A retrospective non-randomized comparative study, conducted during the severe acute respiratory syndrome (SARS) epidemic in Taiwan in 2003 compared quarantined and non-quarantined people. It was unclear why people were not quarantined and this group was not described. Those who were not quarantined had longer time from onset of symptoms to clinical diagnosis (and hospital admission) than quarantined people, but no difference in time from clinical diagnosis to classification (i.e., confirmation of diagnosis). The study did not adjust for differences between groups. There was high loss to follow-up for time to classification. *Overall, the study (and each outcome) was deemed to be of poor methodological quality.*

Appendix E – CASP Questions

STUDY:
1a. Was the goal of the research reported? What was the goal of the research (put in descriptive)?
1b. Was the importance described/reported? Why it was thought important?
1c. Was the relevance reported (eg, applicability)?
1. WAS THERE A CLEAR STATEMENT OF THE AIMS OF THE RESEARCH?
2a. Does the research seek to interpret or illuminate the actions and/or subjective experiences of research participants?
2b. Is qualitative research the right methodology for addressing the research goal?
2c. Does this article present qualitative research (as opposed to narrative exposition)?
2. IS A QUALITATIVE METHODOLOGY APPROPRIATE?
3a. Did the researchers justify the research design (e.g. have they discussed how they decided which method to use)?
3. WAS THE RESEARCH DESIGN APPROPRIATE TO ADDRESS THE AIMS OF THE RESEARCH?
4a. Did the researchers explain how the participants were selected?
4b. Did they explain why the participants selected were the most appropriate to provide access to the type of knowledge sought by the study?
4c. Did they report recruitment methods (e.g. why some people chose not to take part)?
4. WAS THE RECRUITMENT STRATEGY APPROPRIATE TO THE AIMS OF THE RESEARCH?
5a. Did they justify the setting for the data collection?
5b. Was it clear how data were collected (e.g. focus group, semi-structured interview etc.)?
5c. Did the researchers justify the methods chosen for data collection?
5d. Did the researchers make the methods explicit (e.g. for interview method, is there an indication of how interviews are conducted, or did they use a topic guide)?
5e. If methods were modified during the study, have the researchers explained how and why?
5f. Is the form of data clear (e.g. tape recordings, video material, notes etc.)?
5g. Did the researchers discuss saturation of data (regardless of whether they reached saturation)?
5. WERE THE DATA COLLECTED IN A WAY THAT ADDRESSED THE RESEARCH ISSUE?

6a. Did the researchers critically examine their own role, potential bias and influence during (a) formulation of the research questions and (b) data collection, including sample recruitment and choice of location?
6b. Did they report how the researchers responded to events during the study?
6c. Did they report whether they considered the implications of any changes in the research design?
6. HAS THE RELATIONSHIP BETWEEN RESEARCHERS AND PARTICIPANTS BEEN ADEQUATELY CONSIDERED?
7a. Was approval granted from an ethics committee? If "yes" skip next 2 questions.
7b. Were there sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained?
7c. Did the researchers discuss issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)?
7. HAVE ETHICAL ISSUES BEEN TAKEN INTO CONSIDERATION?
8a. Is there is an in-depth description of the analysis process?
8b. If thematic analysis was used, is it clear how the categories/themes were derived from the data?
8c. Did the researchers explain how the data presented were selected from the original sample to demonstrate the analysis process?
8d. Are sufficient data presented to support the findings?
8e. Are contradictory data taken into account (in the methods and/or results)?
8f. Did the researchers critically examine their own role, potential bias and influence during analysis and selection of data for presentation?
8. WAS THE DATA ANALYSIS SUFFICIENTLY RIGOROUS?
9a. Are the findings explicitly reported?
9b. Is there adequate discussion of the evidence both for and against the researcher's arguments (in the results and/or discussion)?
9c. Have the researchers discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)?
9d. Are the findings discussed in relation to the original research question?
9. IS THERE A CLEAR STATEMENT OF FINDINGS?
10a. Did the researchers discuss the contribution the study makes to existing knowledge or understanding (e.g. do they consider the findings in relation to current practice or policy, or relevant research- based literature)?
10b. Do they identify new areas where research is necessary?
10c. Have the researchers discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used?
10. HOW VALUABLE IS THE RESEARCH?

Appendix F- Summary of Quarantine Modeling Studies

Summary of quarantine modelling studies (n=35)

In total, we found 47 modeling studies regarding aspects of quarantine. Twelve of these met stringent criteria for full inclusion and are described elsewhere in the committee's report. The remaining 35 studies were assessed briefly and qualitatively. Below we provide a high-level overview of the models and their overall findings.

While most models focused on the contribution of quarantine (or varying levels of it) to outcomes related to disease transmission, several studies also looked at the economic factors associated with quarantine (e.g., resource utilization; cost effectiveness). Some models' questions focused less on the effectiveness of quarantine generally than on its effect given other conditions (e.g., when antiviral drugs are not provided in time; when adjacent communities are not coordinated in their approach). To some extent however, each model addressed a somewhat unique research question given the variation of factors modeled, including the:

- Disease: SARS, H1N1, Ebola, non-specified infectious disease, etc.
- Disease features: virulence of and transmissibility of virus, available treatment, etc.
- Different types of quarantine: household/congregate, community, hospital, etc.
- Components of quarantine: contact tracing, monitoring, education, etc.
- Other social distancing or control strategies: isolation, school closure, etc.
- Other non-quarantine control strategies: preventative and emergency mass vaccination; vaccination for risk groups; symptom monitoring, etc.
- Population factors: age, household demographics, vaccination status
- Spatial/geographical levels: individual, school, hospital, community, country

Was quarantine effective? More/less with co-occurring factor/intervention?

Nine studies modeled the effectiveness of quarantine only; 26 modeled quarantine in relation to some other strategy or factor, such as antiviral treatment, hospitalization, safe burial practices (for Ebola), contact tracing, and animal elimination. Eleven of the 35 models assumed that quarantine is effective and assessed the impact of quarantine on other parameters of interest; thus, these 11 studies did not test the effectiveness of quarantine. All 24 models found quarantine to be effective; however in 9 of these, quarantine was inextricably linked with co-strategies.

Among the 35 models, 12 used data from real quarantine events (e.g., SARS outbreak in Taiwan in 2003; 2014 Ebola outbreak in West Africa). The remaining models were based, in whole or in large part, on assumed (i.e., hypothetical) quarantine data.

Methodological comments

The questions posed by the models were highly variable, as were the goals of the models (e.g., to describe a past event or to predict impact of strategies for a future one), and the type of data used to estimate parameters (e.g., real vs. hypothetical). If a future modeling study were to be designed, analysts should work with decision-makers to consider the desired goal of the model output and select the model question, data, and analytic strategies to support this end.

Some methodological observations:

- Most studies used hypothetical or assumed data inputs; however not all of these adequately cited the previous literature to justify these assumptions.
    - Ideally, models would report all data sources clearly, provide explicit references, and use a "best evidence approach" to select their parameter data. This would better allow users to judge the generalizability and overall value of the model.
- The goal of the models in general, and the target populations to which estimates could be (or should be) inferred specifically, was not always clear. The studies could therefore be clearer with respect to how they intend the inferences of their model to be used; particularly for decision-makingaudience

Davids, E., and N. Roman. 2014. A systematic review of the relationship between parenting styles and children's physical activity. *African Journal for Physical Health Education, Recreation and Dance* 20:228-246.

Higgins, J. P. T., and S. Green. 2011. *Cochrane handbook for systematic reviews of interventions*. 5.1.0 ed: The Cochrane Collaboration.

Sterne, J. A., M. A. Hernan, B. C. Reeves, J. Savovic, N. D. Berkman, M. Viswanathan, D. Henry, D. G. Altman, M. T. Ansari, I. Boutron, J. R. Carpenter, A. W. Chan, R. Churchill, J. J. Deeks, A. Hrobjartsson, J. Kirkham, P. Juni, Y. K. Loke, T. D. Pigott, C. R. Ramsay, D. Regidor, H. R. Rothstein, L. Sandhu, P. L. Santaguida, H. J. Schunemann, B. Shea, I. Shrier, P. Tugwell, L. Turner, J. C. Valentine, H. Waddington, E. Waters, G. A. Wells, P. F. Whiting, and J. P. Higgins. 2016. Robins-i: A tool for assessing risk of bias in non-randomised studies of interventions. *BMJ* 355:i4919.

Appendix G – Extraction Tables and Quality Assessments for Surveys

Community Preparedness

Study and survey information

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
109_Ablah-2010	US	To assess the collaboration between community health centers and local health departments regarding emergency preparedness and response planning	No event	local health departments and community health centers in the US	all members of sample frame. States for which contact information for both entities was not available were excluded; sought representation from geographic regions (West, Midwest, South, and Northeast)	directory of National Association of County and City Health Officials (for local health department officials) and the National Association for Community Health Centers and individual State Primary Care Association websites (for community health centers)	NR	No information / unclear	Email	Website / online	De novo survey, no information on validation, testing, or question improvement	NR

Community Preparedness

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
110_Adams-2018	US	To identify characteristics of local health departments, which enhance collaborations with community- and faith-based organizations (CFBOs) for emergency preparedness and response.	No event	Disaster preparedness coordinators at local public health departments	Disaster preparedness coordinator at local public health departments	National Association of County and City Health Officials database of 2864 LHDs; Used probability-proportional-to-size sampling design to isolate a random sample	random sample of 750 LHDs that reflect the national distribution of large (>250,000), medium (25,000-250,000), and small (<25,000) populations	Random sample	unclear, but likely email b / c survey was online	Website / online	Previous survey, cited & validated	08 / 2011-12 / 2011
113_Chandra-2013	US	To document baseline community resilience-building barriers and facilitators for for health department and community-based organization (CBO) staff.	No event	public health employees and members of community based organizations	Not explicitly defined: staff representing all divisions within the LA County Department of Public Health and community organization members of Emergency Network of Los Angeles	Emergency Network of Los Angeles (ENLA) member organizations and LACDPH employees	NR	Other (Complete for ENLA ('invited all ENLA member organizations) and random sample of LACDPH employees (stratified by DPH division))	Email	Website / online	De novo survey, no information on validation, testing, or question improvement	02 / 2011-03 / 2011

Community Preparedness

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
44_Acosta et al-2018	US	To summarize ways that networks of community-based organizations (CBO), in partnership with public health departments, contribute to community recovery from disaster.	Real event (Hurricane Sandy)	NYC local public health department and various health, medical, and social services community based organizations	NR	Community based organizations (specific entities not defined) and Department of Health and Mental Hygiene, Office of Emergency Preparedness and Response	NR	No information / unclear	Email	Website / online	Previous survey, cited & validated	2013-2014
21_Adams-2017	US	To (1) identify community disaster resilience behavior patterns in Los Angeles County and (2) study how sociodemographic and social cognitive characteristics are associated with such behavior patterns.	No event	Community-dwelling individuals served by the LA County Department of Public Health	adult residents of communities involved in LACCDR project, greater or equal to 18 yo	address-based sample, selected to be representative of 2010 census tracts in each of the communities	NR	Other (NR (although robust methods, so likely random?))	NR, likely telephone (state survey was 'administered' by landline and cells)	Telephone	Previous survey, cited only (no information on validation)	06 / 2013-08 / 2013

Community Preparedness

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
23_Baezconde-Garbanati-2006	US	To assess the social change needs (social will, community readiness, assets, and barriers) and structural needs (organizational capacity to integrate services into emergency management efforts locally) to maximize community-based participation in emergency preparedness	No event	Hispanic community-based organizations (NGOs) in the United States	Community-based member agencies throughout the United States belonging to The National Alliance for Hispanic Health	Community-based member agencies throughout the United States belonging to The National Alliance for Hispanic Health	53	Other (Purposefully representative: Criteria for selection included that the organizations provided direct services to their community, their geographic representation around the country, services offered, and Hispanic subgroups served. This ensured regional and population diversity)	Telephone, Letter	Letter	De novo survey, no information on validation, testing, or question improvement	10 / 2004
50_Clawson et al-2006-Are community health center.pdf	US	This survey-based study examines the state of CHCs (community health centers) in terrorism preparedness and assesses their training needs.	Hypothetical event (terrorism)	administrators	CHC administrative unit in Florida	unclear	185	Complete sample (all members of sample frame invited to participate in survey)	unclear	Letter	De novo survey, no information on validation, testing, or question improvement	06 / 2004-06 / 2004

Community Preparedness

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
34_Schoch-Spana-2015	US	To investigate local health department (LHD) adoption of federally recommended participatory approaches to public health emergency preparedness and to identify LHD organizational characteristics associated with more intense community engagement-PHEP.	No event	Emergency preparedness coordinators representing local health departments across the US	LHDs were excluded from our sample if they did not have a PHEP contact or if contact information could not be obtained.	LHDs that had been invited to participate in the 2010 National Association of County & City Health Officials National Profile of LHDs	2565	Other (Stratified random sample: Sample selection was stratified by the size of population served using categories previously defined by National Association of County & City Health Officials and by geographic location based on US Department of Health and Human Services region)	Unclear, received 'introductory letter' (which could have been via email)	Website / online	De novo survey, with some testing or question improvement process	08 / 2012-09 / 2012
49_Chi_2015	US	To capture baseline of LACDPH work to describe partnership activities between the LA County Department of Public Health and other organizations, and perceived barriers to partnerships	No event	LA departments of public health	not explicitly defined	"Potential respondents included a sample of various levels of staff within each program in the department that included representation from program directors or managers, analysts, and administrative staff.", proportional to represent the three largest programs	NR	No information / unclear	Email	Website / online	De novo survey, with some testing or question improvement process	10 / 2012-12 / 2012

Community Preparedness

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
32_Rowel-2012	US	To collection information from low-income minorities (mostly African Americans) to asses disaster service needs, perceptions about the avian flu pandemic, and the impact Hurricane Katrina had on the community's perceptions about disaster preparedness, response, and recovery	Real event (Hurricane Katrina and avian flu)	low-income populations in the US	not explicitly reported	4 recruiting organizations recruited from low-income buildings, senior centers, etc, from 4 geographical areas (Anne Arundel County; Baltimore City, Charles County, Somerset County)	not defined	Convenient sample	NR	NR	De novo survey, no information on validation, testing, or question improvement	NR
87_Winem an-2007	US	To assess linkages between health centers and the emergency preparedness and response planning initiatives in their communities using a nationally representative sample, and identify factors associated with strong linkages	No event	Health centers and their respective communities across the US	Health centers in the US	Executive directors for the entire population of health centers supported by the Health Resources and Services Administration's (HRSA) Bureau of Primary Health Care	890	Complete sample (all members of sample frame invited to participate in survey)	Letter	Letter	Collaboration with experts for development	02 / 2005-NR

NR = not reported; NA = not applicable

Community Preparedness
Risk of Bias / Quality

Risk of bias / Quality

PDF name	Adequacy of survey tool development	Study population (eligibility criteria) prespecified and uniformly applied?	Adequacy and appropriateness of polling / sampling methodology	Respondents non-representative of the target population	Percent who responded	Information on margin of error reported
109_Ablah-2010	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[5]	44%	Unclear RoB[1]
110_Adams-2018	Low RoB	Low RoB	Low RoB	Low RoB	42%	Unclear RoB[1]
113_Chandra-2013	Unclear RoB[1]	Low RoB	Low RoB	Unclear RoB[1]	55% of LACDPH staff 36% of ENLA organizations	Unclear RoB[1]
21_Adams-2017	Unclear RoB[1]	Low RoB	Unclear RoB[1]	Low RoB	35%	Unclear RoB[1]
23_Baezconde-Garbanati-2006	Unclear RoB[1]	Low RoB	Unclear RoB[3]	Low RoB	94%	Unclear RoB[1]
32_Rowel-2012	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	NR	Unclear RoB[1]
34_Schoch-Spana-2015	Low RoB	Low RoB	Low RoB	Low RoB	60.7%	Unclear RoB[1]
44_Acosta et al-2018	Low RoB	Unclear RoB[2]	Unclear RoB[1]	Unclear RoB[1]	NR	Unclear RoB[1]
49_Chi_2015	Low RoB	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[4]	34%	Unclear RoB[1]
50_Clawson et al-2006-Are community health center.pdf	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	58%	Unclear RoB[1]
87_Wineman-2007	Low RoB	Low RoB	Low RoB	Low RoB	34%	Unclear RoB[1]

Footnotes

1. No information
2. Broadly defined (community based organizations in NYC) and unclear how operationalized
3. Non-probability sampling but sought groups that were representative of variation
4. Sought proportional representation through design, but not explicit, and no comparison with non-respondents or target population
5. No comparison with non-respondents or target population

Community Preparedness

Outcomes (list of survey questions)

Outcomes

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
109_Ablah-2010	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Categorized the experience as positive	Proportion yes (overall, and by CHC and LDH groups)	
109_Ablah-2010	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Categorized the experience as positive	Proportion yes (overall, and by CHC and LDH groups)	
109_Ablah-2010	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	NA	Documented role for CHC in LHD emergency response plan	Proportion yes or don't know (overall, and by CHC and LDH groups)	
109_Ablah-2010	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Participated in joint preparedness activities with a CHC / LHD	Proportion yes (overall, and by CHC and LDH groups)	
109_Ablah-2010	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Participated in joint response to an emergency event with a CHC / LHD	Proportion yes (overall, and by CHC and LDH groups)	
109_Ablah-2010	Other (specify ...)	Respondent characteristics	Respondent characteristics	Proportion organization roles and work experience	
109_Ablah-2010	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Type of collaboration	Prorportion endorsing 6 categories (Workshop; Planning; Mass distribution (POD); Communication drill / exercise; Community-wide emergency management committees; Other drill / exercise) overall, and by CHC and LDH groups	
109_Ablah-2010	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Willing to collaborate with a CHC / LHD in emergency preparedness or response activities in the future	Proportion yes (overall, and by CHC and LDH groups)	
110_Adams-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	4 multiple linear regression models using respondent and LHD characteristics to predict participation in LHD-CFBO partnership-activity dimensions	Multiple beta-coefficients (and 95% Cis) for variables included in final models for parnership dimensions: communication and outreach; resource sharing; capacity building; partnership planning	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
110_Adams-2018	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Local health department organizational capacity measures	Proportion for categories within characteristics related to disaster preparedness and response (Number of full-time staff members responsible for preparedness; LHD has at least 75% federal funding for emergency preparedness and response; Emergency preparedness funding has been cut in the last 3 years; Layoffs due to funding cuts in last 3 years; Voluntary Organizations Active in Disaster participation; Direct experience with climatic disaster (eg hurricane, tornado, wildfire, flood, mudslide, fire blizzard, extreme cold / heat) in last 3 years; Direct experience with unintentional man-made disaster (eg industrial accident, transportation accident, nuclear / radiological incident, infrastructure failure, environmental health problem / pollution) in last 3 years; LHD is considered a trusted partner by CFBOs in jurisdiction)	
110_Adams-2018	Other (specify ...)	Respondent and LHD characteristics	Measures describing the individual disaster coordinator and contextual factors related to the LHD	Proportions for categories across sample characteristics eg. Disaster-coordinator age; Disaster-coordinator gender; Percent time dedicated to emergency preparedness; Length of time working in emergency preparedness; Time worked in health department; LHD jurisdiction; Size of population LHD serves; Predominant area(s) served)	
110_Adams-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Rating of local health department and community- or faith-based organization partnership building activities: Communication and outreach	Prorortion endorsing categories: excellent, good, fair, poor across 3 subquestions: 1) Disseminated emergency preparedness and response awareness campaigns or materials to CFBOs; 2; Participated in education sessions, health fairs, or community events with CFBOs; 3) Developed or promoted educational activities, resources, or websites for emergency preparedness and response and provided them to CFBOs	
110_Adams-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Rating of local health department and community- or faith-based organization partnership building activities: Resource sharing	Prorortion endorsing categories: excellent, good, fair, poor across 4 subquestions: 1) Engaged CFBOs to provide services in a disaster; 2) Coordinated the use of a CFBO facility during a disaster; 3) Organized points of dispensing with CFBOs; 4) Used CFBO staff and / or volunteers for emergency preparedness and response	
110_Adams-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Rating of local health department and community- or faith-based organization partnership building activities: Capacity building	Prorortion endorsing categories: excellent, good, fair, poor across 3 subquestions: 1) Worked with CFBOs to train their staff for emergency work; 2) Worked with CFBOs in preparing them to have emergency supplies on hand; 3) Conducted community outreach side-by-side with CFBO staff to reach vulnerable and hard-to-reach populations	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
110_Adams-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Rating of local health department and community- or faith-based organization partnership building activities: Partnership planning	Prorortion endorsing categories: excellent, good, fair, poor across 5 subquestions: 1) Worked with CFBOs to create a community-wide disaster preparedness plan with defined roles and responsibilities; 2) Established a National Incident Management System-compliant plan to be used in an emergency with CFBOs; 3) Established formal agreements (eg memoranda of understanding or prearranged reimbursement agreements) with CFBOs; 4) Established informal agreements with CFBOs; 5) Incorporated mechanisms for CFBOs to provide input about emergency preparedness for vulnerable populations	
113_Chandra-2013	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	NA	Assessing education activities provided by both ENLA and LACDPH: There will be enough volunteers to respond to and recover from disaster	Proportion agree or somewhat agree	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	NA	Assessing education activities provided by both ENLA and LACDPH: People in Los Angeles County can rely on each other to help in a disaster	Proportion agree or somewhat agree	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	NA	Assessing education activities provided by both ENLA and LACDPH: Organizations in the area I serve have knowledge to work together to prepare for / respond to disaster	Proportion agree or somewhat agree	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	NA	Assessing education activities provided by both ENLA and LACDPH: Individuals / families that I serve have the knowledge to prepare for and respond to disaster	Proportion agree or somewhat agree	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Feasibility (barriers to implementation of the practice and ability to overcome them)	NA	Barriers to implementing community resilience activities:	Proportion endorsed of categories: lack of materials in preparedness to share with community members; lack of preparedness training; lack of community interest in preparedness; lack of organizational interest in pre- paredness	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - operations planning continuity & coordination with response partners	NA	Current activities in disaster preparedness	Scale of none [0% time); a little [1%---24%time); some [25%---49% time), most [50%---74% time); nearly all [75%---99% time); and all [100% time))	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Assists partner NGOs in obtaining funding	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Creates connections for community support	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Disseminates info about emergencies	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Educates community about preparedness	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Ensures constituents know where to go in emergency	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Helps fill gaps in unmet needs	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Refers community to educational / training services	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Refers community to financial support services	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Current efforts or education to support community resilience: Serves on a committee dedicated to preparedness	Proportion endorsed participating in activity	Source: both LACDPH and ENLA respondents

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
113_Chandra-2013	Intermediate - operations planning continuity & coordination with response partners	NA	Daily activity	Proportion endorsed : public safety or disaster preparedness, human services, food and nutrition activities	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Engagement of limited-English- proficiency populations	Proportion yes	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Engagement of low-income populations	Proportion yes	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Formal partnership with LACDPH	Proportion yes	Source: ENLA respondents
113_Chandra-2013	Intermediate - operations planning continuity & coordination with response partners	NA	Specific activities in disaster preparedness	Proportion endorsed: oganizational preparedness, training and exercises, risk communication, partnership development, environmental preparedness , community engagement (NB: highlight only specific categories in results, list incomplete)	Source: ENLA respondents
113_Chandra-2013	Intermediate - operations planning continuity & coordination with response partners	NA	Specific activities in disaster recovery	Proportion endorsed: community engagement (NB: highlight only specific categories in results, list incomplete)	Source: ENLA respondents
113_Chandra-2013	Intermediate - operations planning continuity & coordination with response partners	NA	Specific activities in disaster response	Proportion endorsed: staff mobilization, organizational response, community engagement (NB: highlight only specific categories in results, list incomplete)	Source: ENLA respondents
113_Chandra-2013	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Types of organizations with which LACDPH had partnerships (e.g., business, faith-based organiza- tions)	Proportion endorsed: neighborhood associations, businesses, hospitals, health clinics	Source: LACDPH respondents
113_Chandra-2013	Intermediate - time taken to deliver risk communications and assistance to at-risk populations	NA	Using H1N1 influenza as the recent disaster example, queired respondents about their satisfaction that LACDPH currently exhibited core community resilience capabilities, including educating residents: satisfied with their ability to educate the public about H1N1 before it occurred	Proportion satisfied (unclear)	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - time taken to deliver risk communications and assistance to at-risk populations	NA	Using H1N1 influenza as the recent disaster example, queired respondents about their satisfaction that LACDPH currently exhibited core community resilience capabilities, including educating residents: satisfied in their ability to communicate information after the event had started	Proportion satisfied (unclear)	Source: both LACDPH and ENLA respondents

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
113_Chandra-2013	Intermediate - time taken to deliver risk communications and assistance to at-risk populations	NA	Using H1N1 influenza as the recent disaster example, queired respondents about their satisfaction that LACDPH currently exhibited core community resilience capabilities, including educating residents: satisfied in their ability to communicate information after the event had started	Proportion satisfied (unclear)	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Using H1N1 influenza as the recent disaster example, queired respondents about their satisfaction that LACDPH currently exhibited core community resilience capabilities, including educating residents: satisfied in LACDPH ability to connect with CBOs in preparedness	Proportion satisfied (unclear)	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Using H1N1 influenza as the recent disaster example, queired respondents about their satisfaction that LACDPH currently exhibited core community resilience capabilities, including educating residents: satisfied in their ability to attend to special needs or traditionally vulnerable populations compared with other areas of H1N1 response	Proportion satisfied (unclear)	Source: both LACDPH and ENLA respondents
113_Chandra-2013	Intermediate - operations planning continuity & coordination with response partners	NA	Usual array of activities	List (metric not reported), only reported descriptively in text: monitoring health status, developing public health policies, and engaging the community	Source: LACDPH respondents
21_Adams-2017	Intermediate - assistance-seeking and engagement with PH by at-risk populations	NA	Community capacity and skill building	Proportion endorsed: Attended first aid, CPR, etc, training; Attended psychological first aid training; Worked or volunteer to help neighborhood prepare / respond to a disaster / emergency; across 3 categories of clusters (Inactive cluster, very active cluster, medium active cluster)	
21_Adams-2017	Intermediate - assistance-seeking and engagement with PH by at-risk populations	NA	Household self-sufficiency	Proportion endorsed: Has 3-d supply of water, Has 3-d supply of food, Has household plan to reunite, Bought additional emergency supplies; across 3 categories of clusters (Inactive cluster, very active cluster, medium active cluster)	
21_Adams-2017	Intermediate - assistance-seeking and engagement with PH by at-risk populations	NA	Information seeking and exchange	Proportion endorsed: Attended community meeting discussing preparedness, Talked with a neighbor about preparedness, Looked for information regarding preparedness; across 3 categories of clusters (Inactive cluster, very active cluster, medium active cluster)	
21_Adams-2017	Intermediate - assistance-seeking and engagement with PH by at-risk populations	NA	Respondents' clustering	Proportion Inactive, Very active, Medium active; also logistic regression model predicting most important variables for being in the very active cluster	
21_Adams-2017	Intermediate - assistance-seeking and engagement with PH by at-risk populations	NA	Respondents' social demographic factors predicting clustering	Proportions for categories across participant characteristics (e.g., sex, income, education), perceived health; across 3 clusters	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
21_Adams-2017	Intermediate - assistance-seeking and engagement with PH by at-risk populations	NA	Respondents' social demographic factors predicting clustering	Proportions for categories across social cognitive variables (e.g., self efficacy; Perceived benefit of emergency preparedness; Locus of responsibility during emergency; Trust in public health department; Civic engagement in past 12 mo; How many people in neighborhood could you ask for a favor?) across 3 clusters	
21_Adams-2017	Intermediate - assistance-seeking and engagement with PH by at-risk populations	NA	Types of community resilience behaviors	3 categories identied by factor analysis	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	Do people come from outside your general geographic area to receive services in your agency?	yes / no / don't know (summarized descriptively)	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	Do you have an emergency preparedness plan in place for your agency? This refers to a plan of action regarding what to do and where to go in case of a public health emergency	yes / no / don't know (proportion no)	
23_Baezconde-Garbanati-2006	Feasibility (barriers to implementation of the practice and ability to overcome them)	NA	Do you have any funding for public health emergency preparedness in your agency?	yes / no / don't know (proportion no)	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	Do you have emergency preparedness kits for your staff?	yes / no / don't know (NR in results)	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	Do you review it regularly with your staff?	yes / no / don't know (proportion no)	
23_Baezconde-Garbanati-2006	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Does your agency currently have a partnership or intends to link to the following organizations in the future to prepare for a public health emergency in your community? Mark all that apply	23 categories (proportion of agencies per category that CBO's would establish linkages for emerg prep)	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	Does your agency have a mechanism or protocol to support staff that provides crisis services to your community?	yes / no / don't know (NR in results)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Does your agency have bilingual / bicultural mental health outreach, counseling and cris prevention staff, trained to manage a public health emergency in your community?	yes / no / don't know (summarized descriptively)	
23_Baezconde-Garbanati-2006	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Does your agency have close relationships with local hospitals to support medical translation services in an emergency situation?	yes / no / don't know (NR in results)	

Community Preparedness

Outcomes (list of survey questions)

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23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Does your agency have materials for emergency preparedness?	yes / no / don't know (proprotion no; summarize content of material descriptively)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Has your agency been involved in any public health emergency situation in the last 5 years?	yes / no / don't know (proportion yes)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	How capable do you judge your staff was in handling the public health emergency specified (in question 26)	3 categories (NR in results)	
23_Baezconde-Garbanati-2006	Values and preferences (e.g. perceptions of the intervention / preferences for implementation approach)	NA	In your opinion what components should an established emergency preparedness protocol have to address the needs of your community?	47 categories (NR in results)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	In your opinion, does your local Public Health Department have the cultural proficiency and language resources to respond to the specific needs of your community in case of a public health emergency?	yes / no / don't know (proportion no)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	In your opinion, how culturally proficient are these materials for your community? Cultural proficiency in this case refers to materials that accurately represent the values, literacy level, culture, and language needs of the community you service	4 categories (of those w / materials, proprotion not culturally proficient)	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	In your opinion, would it be best for agencies such as yours to release your staff to go home to their families in case of a public health emergency, and as an agency not formally become involved in responding (This does not preclude individual involvement in responding to a public health emergency)	yes / no / don't know (NR in results)	
23_Baezconde-Garbanati-2006	Other (specify ...)	Vulnerable population characteristics	Of the following, which groups does your agency serve? (check all that apply)	8 racial / ethnic categories (summarized descriptively - mostly Hispanic	
23_Baezconde-Garbanati-2006	Other (specify ...)	Vulnerable population characteristics	Of the following, which Hispanic subgroups does your agency serve? (check all that apply)	8 Hispanic group categories (summarized descriptively)	

Community Preparedness

Outcomes (list of survey questions)

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23_Baezconde-Garbanati-2006	Feasibility (barriers to implementation of the practice and ability to overcome them)	NA	Please specify the funding sources for emergency preparedness in your agency (mark all that apply)	8 categories (NR in results)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Should a public health emergency occur in the area your agency services, do you think your agency is currently prepared to meet the needs of its staff and community?	5 categories (proportion not prepared)	
23_Baezconde-Garbanati-2006	Other (specify ...)	Vulnerable population characteristics	To what specific age group do you provide services? (check all that apply)	7 age categories (NR in results)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Were your agency resources, staff, and capabilities maxed out in responding to this public health emergency?	yes / no / don't know (proportion yes)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	What forms of communication would your agency use to communicate its services to your community in case of a public health emergency? Mark all that apply	16 categories (proportion of agencies that would use this channel)	
23_Baezconde-Garbanati-2006	Other (specify ...)	Vulnerable population characteristics	What is the approximate literacy level of most of the clients your agency seves?	10 categories (NR in results)	
23_Baezconde-Garbanati-2006	Other (specify ...)	Vulnerable population characteristics	What language / s do most of your clients speak? Mark all that apply	5 language categories (NR in results)	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	What specific servcies does your agency provide? (mark all that apply)	10 categories (proprotion of agencies providing service for each category)	
23_Baezconde-Garbanati-2006	Intermediate - operations planning continuity & coordination with response partners	NA	What support is provided to staff at a time of a public health emergency?	9 categories (NR in results)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	What types of services would your agency like to offer after a public health emergency occurs?	50 categories (summarized descriptively)	

Community Preparedness

Outcomes (list of survey questions)

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23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	What types of services would your agency like to offer before a public health emergency?	25 categories (proportion willing to offer service per category)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	What types of services would your agency like to offer during a public health emergency?	23 categories (summarized descriptively)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Which of the following types of materials do you have? (check as many as apply)	7 categories (summarized descriptively)	
23_Baezconde-Garbanati-2006	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	With proper resources, would your agency be willing to coordinate a comprehensive culturally proficient emergency preparedness plan tailored to your community?	agree / disagree / don't know (summarized descriptively)	
23_Baezconde-Garbanati-2006	Values and preferences (e.g. perceptions of the intervention / preferences for implementation approach)	NA	Would your agency like to receive public health emergency preparedness training?	yes / no / don't know (proportion yes)	
32_Rowel-2012	Other (specify ...)	Confidence in government	Based on government's response to Hurricane Katrina, confidence that government would do a good job in protecting the health of the public	Proportion to endorse 'not too' or 'not at all confident' their government would do a good job in protecting the health of the public.	
32_Rowel-2012	Other (specify ...)	Confidence in government	Based on government's response to Hurricane Katrina, confidence that government would respond fairly to health needs regardless of race, ethnicity, income, or other personal characteristics	Proportion to endorse 'not too' or 'not at all confident' their government would do a good job in protecting the health of the public.	
32_Rowel-2012	Equity (e.g. reduced disparities)	NA	Greatest concern after watching Hurricane Katrina aftermath	Proportion endorsed categories: that the poorly delivered disaster-related services were due to evacuees' race; the mental health of hurricane survivors; failure to evacuate poor people out of New Orleans; the treatment of people by law enforcement after the hurricane	
32_Rowel-2012	Other (specify ...)	Percieved support	Individual / group respondents expect to be their primary source of support in the event of a hurricane / tornado	Proportion to endorse categories: family; religious or other voluntary organizations; the government; other people	
32_Rowel-2012	Equity (e.g. reduced disparities)	NA	Perceived primary reasons for the inadequate provision of emergency management services	Proportion endorsed categories: both racism and classism; poor management	
32_Rowel-2012	Other (specify ...)	Respondent characteristics	Respondent characteristics	Proportios across various categories for age, gender, marital status, education, employment	

Community Preparedness

Outcomes (list of survey questions)

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34_Schoch-Spana-2015	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Community Engagement Activities by Local Health Departments for Emergency Preparedness: Public communication about individual / household preparedness	Proportion endorsing subquestions: Develop and distribute educational materials; Conduct surveys or focus groups; Hold interactive events (eg, trainings, workshops); overall and split by 4 categories of jurisdiction size	
34_Schoch-Spana-2015	Intermediate - time taken to deliver risk communications and assistance to at-risk populations	NA	Community Engagement Activities by Local Health Departments for Emergency Preparedness: Public communication about policies and planning	Proportion endorsing subquestions: Publish PHEP plans for comment; Convene town hall meetings on plans; Construct PHEP policy based on community input; overall and split by 4 categories of jurisdiction size	
34_Schoch-Spana-2015	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Community Engagement Activities by Local Health Departments for Emergency Preparedness: Collaboration with outside organizations	Proportion endorsing subquestions:Form basic relationships with CBOs, FBOs, businesses; Provide PHEP technical assistance to organizations; Develop formal partnerships through MOUs or MOAs ; overall and split by 4 categories of jurisdiction size	
34_Schoch-Spana-2015	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Community Engagement Activities by Local Health Departments for Emergency Preparedness: Enhanced protection of vulnerable populations	Proportion endorsing subquestions: Develop PHEP materials for non-English speakers; Gather data on PHEP needs of vulnerable populations; Build partnerships to mobilize nongovernmental resources ; overall and split by 4 categories of jurisdiction size	
34_Schoch-Spana-2015	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Community Engagement Activities by Local Health Departments for Emergency Preparedness: Mobilization of volunteers	Proportion endorsing subquestions:Recruit volunteers and maintain registries; Conduct volunteer training and exercises; Develop policies that protect volunteers in emergencies; overall and split by 4 categories of jurisdiction size	
34_Schoch-Spana-2015	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Multivariate regression analysis of LHD characteristics and community engagement in public health emergency preparedness scores	Marginal effects and 95% Cis	
34_Schoch-Spana-2015	Resource use (including cost)	NA	Organizational characteristics of programs for community engagement in preparedness at LHDs: Funding	Proportion endorsing: 1) Allocated funding to CE in the last year; 2) Perceives staffing as adequate; overall and split by 4 categories of jurisdiction size	
34_Schoch-Spana-2015	Other (specify ...)	Respondent characteristics	Organizational characteristics of programs for community engagement in preparedness at LHDs: Staffing—CE coordinator	Proportion endorsing: 1) Is full-time employee 2)Has prior CE experience; 3) Has formal CE training ; overall and split by 4 categories of jurisdiction size	
34_Schoch-Spana-2015	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Organizational characteristics of programs for community engagement in preparedness at LHDs: Staffing—Organizational culture	Proportion endorsing: 1) LHD has formal CE policy; 2) LHD leaders support CE; 3) LHD has future plans to increase CE; overall and split by 4 categories of jurisdiction size	

Community Preparedness

Outcomes (list of survey questions)

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34_Schoch-Spana-2015	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Organizational characteristics of programs for community engagement in preparedness at LHDs: Staffing—Partners—support from:	Proportion endorsing: 1) Elected officials; 2) Emergency management agency; 3) Disaster volunteer organization; 4) Community-based organizations; 5) Faith-based organizations; 6) Businesses; 7)Schools; 8) Public at-large; overall and split by 4 categories of jurisdiction size	
44_Acosta et al-2018	Feasibility (barriers to implementation of the practice and ability to overcome them)	NA	Barriers (eg, lack of time) and facilitators (eg, history of collaboration) to partnerships during disaster recovery	Categorical lists to endorse: 10 facilitator categories (Strong organizational leadership (eg, able to resolve conflicts, shared interest in rebuilding the community, History of collaboration and sharing with recovery partners, Recovery activities align with organizational missions, Prior disaster experience of organizations in the community, Funding from state and federal sources, Policy or funding guidance required organizations to work together, Funding from NYC's DOHMH, Other, None); 8 barrier categories (Funding limitations, Difficult to find time to cultivate recovery partnerships, Competition among the organizations involved in recovery, Policy made it difficult to work together, Poor leadership (eg, does not resolve conflicts, not organized), Lack of trust between my organization and recovery partners, Other, None)	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Benefits (if any) organizations received as a result of their work with DOHMH (eg, more input on emergency plans)	Unclear	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Benefits received as a result of their participation in the formal recovery partnership (eg, improved access to information on recovery services)	Unclear	
44_Acosta et al-2018	Intermediate - on capacity to reach at-risk populations before a PH emergency / during an emergency / & to deliver services after an emergency	NA	Buroughs (NYC) served	Yes / no across 5 categories (NYC Boroughs)	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Extent a strong partnership with DOHMH is needed to promote recovery in their community	Categorical, unclear; "not at all to a great deal"	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Extent to which participation in a formal recovery partnership contributed to their ability to impact recovery	Unclear	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	For each partner, describe why they partnered	Categorical, unclear "sharing information to joint service delivery"	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	For each partner, how frequently they communicated	Categorical: actively, occassionally, no longer	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Number of ties with other organizations	Number (at 4 time points: Before Hurricane Sandy, During the first month after Hurricane Sandy, 2–6 months after Hurricane Sandy, More than 6 months after Hurricane Sandy)	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Partnered with DOHMH on any recovery activities (eg, coordinating training or education on disaster recovery)	Yes / no	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Perceptions of the ways in which the recovery services that they and their partners provided impacted their community	Categorical list (no limit): 7 categories (identified needs of affected residents, provided medical care to residents, supported residents emotionally or financially, provided education on or physically assisted with mold or resources for mold cleanup, helped rebuild damaged houses or infra-structure, shared recovery information with residents, shared community information with recovery services contractors)	
44_Acosta et al-2018	Values and preferences (e.g. perceptions of the intervention / preferences for implementation approach)	NA	Recovery Services [provided by CBOs) (After Hurricane Sandy) - Most Important Service	Yes / no across 24 categories: Animal, Case management, Child services, Clothing, Community liaison Construction infrastructure Family violence, Financial assistance, Food services, Temporary or permanent housing, Home care services, Immigrant services, Job assistance, Legal, insurance services, Medical care, Medication / pharmacy, Mental health, Preparing for next disaster, Senior services, Spiritual support, Transportation, Volunteer opportunities, Warehousing, Other	
44_Acosta et al-2018	Other (specify ...)	Organizational characteristics	Recovery Services [provided by CBOs) (After Hurricane Sandy) - Providing service	Yes / no across 24 categories: Animal, Case management, Child services, Clothing, Community liaison Construction infrastructure Family violence, Financial assistance, Food services, Temporary or permanent housing, Home care services, Immigrant services, Job assistance, Legal, insurance services, Medical care, Medication / pharmacy, Mental health, Preparing for next disaster, Senior services, Spiritual support, Transportation, Volunteer opportunities, Warehousing, Other	
44_Acosta et al-2018	Resource use (including cost)	NA	Resources needed to improve future partnerships (eg, funding, guidance on where resources for partnership are available).	Categorical lists to endorse: 7 resources categories (Funding, Guidance on where resources are available, Strategies on how to work with government agencies, Guidance on what to look for in partnerships, Templates for putting together MOUs / MOAs, Other, None)	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
44_Acosta et al-2018	Other (specify ...)	Organizational characteristics	Routine Services [provided by CBOs) (Prior To Hurricane Sandy) - Providing service	Yes / no across 24 categories: Animal, Case management, Child services, Clothing, Community liaison Construction infrastructure Family violence, Financial assistance, Food services, Temporary or permanent housing, Home care services, Immigrant services, Job assistance, Legal, insurance services, Medical care, Medication / pharmacy, Mental health, Preparing for next disaster, Senior services, Spiritual support, Transportation, Volunteer opportunities, Warehousing, Other	
44_Acosta et al-2018	Values and preferences (e.g. perceptions of the intervention / preferences for implementation approach)	NA	Routine Services [provided by CBOs) (Prior To Hurricane Sandy) - Most Important Service	Yes / no across 24 categories: Animal, Case management, Child services, Clothing, Community liaison Construction infrastructure Family violence, Financial assistance, Food services, Temporary or permanent housing, Home care services, Immigrant services, Job assistance, Legal, insurance services, Medical care, Medication / pharmacy, Mental health, Preparing for next disaster, Senior services, Spiritual support, Transportation, Volunteer opportunities, Warehousing, Other	
44_Acosta et al-2018	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Whether organization was part of a formal recovery partnership such as a long-term recovery committee, unmet needs committee, or recovery coalition	Yes / no	
49_Chi_2015	Feasibility (barriers to implementation of the practice and ability to overcome them)	NA	Perceived challenges in partnerships	Proporportion endorsing 9 barriers: Lack of training to engage community partners; Lack of support from superiors; Limited or no interest (LACDPH staff); Limited or no interest (community); Does not align with program priority; Community- and faith-based organizations do not trust us; Community- and faith-based organizations do not have the capacity; Maintaining relationships is too much work	
49_Chi_2015	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Reported partnership sectors	Proportion endorsing 11 sectors described by CDC: Health care organizations; Mental / behavioral health providers; Housing and sheltering providers; Aging focused organizations; Education and child care centers; Other social services; Cultural- and faith-based organizations; Emergency management organizations; Community leadership; Businesses; Media	
49_Chi_2015	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Reprted partnership activities	Proportion endorsing 6 partnership activites: Provide education; Outreach to vulnerable populations; Conduct community needs assessment; Maintain ongoing communication; Secure funding together; Establish mechanisms for community input	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
49_Chi_2015	Other (specify ...)	Respondent and LHD characteristics	Respondent and LHD characteristics	Proportion of respondents reprsenting different levels and programs of LHD	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Addresses increasing operational capacity by at least 20%	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Addresses the protection of clinicians to help ensure their availability during a public health emergency.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	annual “refresher” training in biological or chemical terrorism	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Assigns specific individuals to a disaster response team	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center’s current resources, this is what we need to respond: Training for personnel	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center’s current resources, this is what we need to respond: Emergency pharmaceutical supplies	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center’s current resources, this is what we need to respond: Participate in local communication networks	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center’s current resources, this is what we need to respond: Obtaining personal protective equipment	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center’s current resources, this is what we need to respond: Available emergency or back-up power sources	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center's current resources, this is what we need to respond: Available alternate communication systems	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center's current resources, this is what we need to respond: .Family care planning for employees	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center's current resources, this is what we need to respond: Creating decontamination areas	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center's current resources, this is what we need to respond: Alternative transportation systems for supplies & personnel	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center's current resources, this is what we need to respond: Assistance in preparing and educating the community	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Based on our center's current resources, this is what we need to respond: Access / improved access to the internet	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Do staff members receive training in disaster awareness, preparedness, and response?	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Do staff members receive training in disaster awareness, preparedness, and response?	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Does your center have an emergency response / disaster plan	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Has a provision to extend regular treatment hours in an emergency or disaster situation	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Has a section for addressing security issues, including the provision of personnel to secure the site.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Has an organizational structure and organized leadership during a disaster or an emergency	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Has been reviewed and updated within the last 12 months	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Has contingencies for a mass influx of patients.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Includes what to do if your primary source of communication fails.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Makes provisions for patient overflow and tracking	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Makes provisions for vulnerable populations' health needs.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has a designated coordinator / commander on premises assigned for emergencies.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has a disaster plan to provide communication with the public and media in bioterrorism events	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has a primary isolation site where chemically or biologically contaminated patients may be housed in an emergency	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has alternative means of communication within all parts of our facility	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has an emergency or back-up power source.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has an established method for tracking the immunization status of our professional staff and employees.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has an evaluation to determine the effectiveness of our disaster training program.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has an individual assigned to emergency preparedness and response issues as part of their regular responsibilities.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has assessed the needs related to bioterrorism	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has assessed the needs related to disease surveillance and reporting	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has assessed the needs related to mental / behavioral health	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has assessed the needs related to responding to other public health emergencies	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has available patient education materials regarding emergency preparedness.	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has biohazard suits	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has chemical suits.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has chemical suits. center has a predesignated way to communicate with staff after hours in an emergency.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has chemical suits. center has a system in place whereby it is notified by the county health department about suspicious clusters of symptoms or disease outbreaks	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has chemical suits. center has alternative means of external communication in the event of telephone disruption	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has chemical suits. center has high-speed internet access	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has chemical suits. center has provisions to effectively communicate with non–English-speaking patients and their families in the event of an emergency	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has chemical suits. center has secure offsite data backup capability for its information systems	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has conducted or participated in drills on Biological agents exposure	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has conducted or participated in drills on Bomb threats	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has conducted or participated in drills on Chemical agent exposure	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has conducted or participated in drills on Fire / explosion	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has conducted or participated in drills on Mass casualty	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has conducted or participated in drills on Nuclear / radiological agent exposure	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has conducted or participated in drills on Utility failure	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has coordinated planning and response activities with the county or other healthcare providers	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has disaster training conducted during new employee orientation	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has medical providers or staff that have agreed to volunteer their services to other organizations in an emergency	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has medical staff that has been trained to identify and properly / safely remove contaminants.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has onsite decontamination capabilities	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has procedures in place for establishing emergency communication with county or local government	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has procedures in place for establishing emergency communication with center associations, hospitals, and other partners	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has provisions for obtaining emergency or back-up supplies from vendors, hospitals, county, or other alternative source	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has respirators	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has space to create a temporary morgue	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has space to set up an area for mass immunization and vaccinations	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has training that has been provided to the medical staff specific procedures regarding biological and chemical agents.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center has training that includes preparation of staff for emotional and mental impact of a significant disaster or terrorist attack.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center is included in our county's mass prophylaxis plan, providing resources such as personnel or facility space	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center is incorporated into a local hospital's disaster plan	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center participates in the county health department EPICOM alert system.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center regularly participates in Regional Domestic Security Task Force activities	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	our center routinely reports communicable diseases to the county health department.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center's priority of needs are communication	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center's priority of needs are equipment	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center's priority of needs are planning and preparedness tools	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center's priority of needs are supplies	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center's priority of needs are technical advice and information	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Our center's priority of needs are training	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Specifically addresses bioterrorism preparedness	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	training in preparedness for chemical or biological terrorism events	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written agreements with EMS.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written agreements with hospitals	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written agreements with pharmacies.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written agreements with physician groups	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written agreements with social services	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written agreements with state department of health.	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on acquisition and handling of suspect laboratory specimens	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on addressing patient and situation confidentiality	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on evacuation	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on evidence collection and consultation with local law enforcement	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on handling patients who are exposed to biological or chemical agents	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on isolating segments of the facility	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on patient care during a disaster	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on personnel recall	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on reports of suspicious symptoms to the county health department	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on security / lock-down	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on testing for exposure to biological or chemical agent	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on transporting key staff to and from their work site in the event of an emergency	Categorical: Yes, No	
50_Clawson-2006	Health - appropriate use of public health guidance and the incorporation of guidance into practices, programs, and protocols	NA	Written policies on triaging patients to appropriate hospitals or other treatment center	Categorical: Yes, No	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
87_Wineman-2007	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Association between emergency Preparedness Linkage Items (Community inclusion of health center in event response) and health center demographic factors	Proportion endorsing 7 subquestions: overall, and stratified by 4 health center factors (location-urban / rual, no. sites-large / small, user volume-high / low, joint commission accredited-yes / no). Subquestions: Community plan addresses health center's need for additional supplies and equipment in an emergency; Community plan has a mechanism for verifying licensure or credentialing volunteer clinical staff in an emergency; Health center has arrangements for reimbursement of resources expended in response to an emergency; Health center uses 800-MHz radio to integrate with community during a response; Community EMA has ability to reach a designated health center contact 24 / 7; Community plan addresses health center staff's traveling to the scene of an emergency to provide care; Health center is represented by staff or PCA / network at emergency operations center during a response; bivariate analysis, chi square test for significance for each factor	
87_Wineman-2007	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Association between emergency Preparedness Linkage Items (Community inclusion of health center in event response) and health center experience and perceived risk factors	Proportion endorsing 7 subquestions: overall, and stratified by 2 health center predictors (experience responding to potential / suspected disaster-y / n; perceived risk for hazards and threats-yn / n). Subquestions: Community plan addresses health center's need for additional supplies and equipment in an emergency; Community plan has a mechanism for verifying licensure or credentialing volunteer clinical staff in an emergency; Health center has arrangements for reimbursement of resources expended in response to an emergency; Health center uses 800-MHz radio to integrate with community during a response; Community EMA has ability to reach a designated health center contact 24 / 7; Community plan addresses health center staff's traveling to the scene of an emergency to provide care; Health center is represented by staff or PCA / network at emergency operations center during a response; bivariate analysis, chi square test for significance for each factor	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
87_Wineman-2007	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Association between emergency Preparedness Linkage Items (Health center involvement in community planning process) and health center demographic factors	Proportion endorsing 7 subquestions: overall, and stratified by 4 health center factors (location-urban / rual, no. sites-large / small, user volume-high / low, joint commission accredited-yes / no). Subquestions: Health center EOP developed in collaboration with county / local EMA; Health center staff are involved in community emergency preparedness and response planning; Health center is represented on the community planning group by a staff member or PCA; Health center or PCA is a member of the community health care coalition; Health center staff involved in emergency management have seen community EOP; If health center provides laboratory services, staff have been trained in proper techniques for acquisition and transport of suspect specimens; Health center staff have been involved in community-wide training) bivariate analysis, chi square test for significance for each factor	
87_Wineman-2007	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Association between emergency Preparedness Linkage Items (Health center involvement in community planning process) and health center experience and perceived risk factors	Proportion endorsing 7 subquestions: overall, and stratified by 2 health center predictors (experience responding to potential / suspected disaster-y / n; perceived risk for hazards and threats-yn / n). Subquestions: Health center EOP developed in collaboration with county / local EMA; Health center staff are involved in community emergency preparedness and response planning; Health center is represented on the community planning group by a staff member or PCA; Health center or PCA is a member of the community health care coalition; Health center staff involved in emergency management have seen community EOP; If health center provides laboratory services, staff have been trained in proper techniques for acquisition and transport of suspect specimens; Health center staff have been involved in community-wide training; bivariate analysis, chi square test for significance for each factor	
87_Wineman-2007	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Association between emergency Preparedness Linkage Items (Resources) and demographic factors	Proportion endorsing 2 subquestions: overall, and stratified by 4 health center factors (location-urban / rual, no. sites-large / small, user volume-high / low, joint commission accredited-yes / no). Subquestions: Health center has received federal, state, or local funds to support emergency preparedness activities since 2001; Health center has received in-kind assistance from community entities for emergency preparedness activities; bivariate analysis, chi square test for significance for each factor	

Community Preparedness

Outcomes (list of survey questions)

Study pdf	Outcome domain	Other (specify)	Specific question(s) (copy / paste)	Response scale for question(s)	Comments
87_Wineman-2007	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Association between emergency Preparedness Linkage Items (Resources) and health center experience and perceived risk factors	Proportion endorsing 2 subquestions: overall, and stratified by 2 health center predictors (experience responding to potential / suspected disaster-y / n; perceived risk for hazards and threats-yn / n). Subquestions: Health center has received federal, state, or local funds to support emergency preparedness activities since 2001; Health center has received in-kind assistance from community entities for emergency preparedness activities; bivariate analysis, chi square test for significance for each factor	
87_Wineman-2007	Intermediate - participation in healthcare coalitions, partnerships, & organizational networks	NA	Association between indicators of strong linkages and health center demographic and experience factors	Proportion endorsing 3 subquestions: overall, and stratified by 6 health center predictors above (demographic, experience, perceived risk). Subquestions: Health center has completed HVA of community in collaboration with community responders; Health center's role during an emergency is documented in community EOP; Health center has participated in community- wide emergency or disaster drills / exercises since 2001; bivariate analysis, chi square test for significance for each factor	
87_Wineman-2007	Feasibility (barriers to implementation of the practice and ability to overcome them)	NA	Barriers to building linkages within the community	Proportion endorsing 6 categories (only report most common barriers in text): staff limitations and time restraints; lack of funding for training and equipment; potential role of the health center not being understood by community emergency planners; lack of strong leadership or poor coordination of efforts among stakeholders; lack of reimbursement for emergency services provided by the center; no barriers	
87_Wineman-2007	Other (specify ...)	Perceived threats	Perceived hazards and threats among health centers	Proportion endorsing 6 natural hazard and 3 man-made hazard categories	
87_Wineman-2007	Other (specify ...)	Respondent and health center characteristics	Respondent and health center characteristics	Proportion administators, medical and clinical staff, and QI and compliance personnel; center user volume and region	
87_Wineman-2007	Other (specify ...)	Satisfaction with partnerships	Satisfaction with their health center's degree of involvement in community emergency preparedness activities	5-point scale (not at all statisfied to completely satisfied); mean satisfaction score; proprotion of participants endorsing 'somewhat or less than satisfied' categories	

NR = not reported; NA = not applicable

Non-Pharmacological Interventions

Study and survey information

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
354_Adler-2018	US	To document the mental health and attitudes of soldiers in quarantine	Real event (Ebola)	US soldiers in quarantine	NR (infer all soldiers in quarantine cohorts)	U.S. soldiers from four different quarantine cohorts	660	Complete sample (all members of sample frame invited to participate in survey)	NR	NR	De novo survey, no information on validation, testing, or question improvement	NR
399-Taylor-Clark-2005	US	determine the effects of a set of variables that have been found in previous studies to influence public opposition to compulsory government health policies on opinions about compulsory vaccination and quarantine.	Hypothetical event (smallpox bioterrorism attack)	U.S. population	18 years of age and older	Anyone with a telephone	NR	Random sample	Telephone	Telephone	Previous survey, cited & validated	10 / 2002-12 / 2002
403-Wray-2012	US	To assess barriers to and facilitators of adherence to directives issued in response to a hypothetical scenario involving the intentional release of the bacterium that causes plague	Hypothetical event (intentional release of the bacterium that causes plague)	residents in the St Louis, Missouri, area	Adults aged 18 years and older were considered eligible for the survey	a random-digit dial survey	1013	Random sample	Telephone	Telephone	De novo survey, no information on validation, testing, or question improvement	05 / 2008-06 / 2008
409-Considine-2011	Australia	examine the impact of Pandemic (H1N1) 2009 Influenza on the Australian emergency nursing and medicine workforce, specifically absenteeism and deployment	Real event (H1N1 outbreak)	nurses	All members of three professional colleges for emergency nursing and medicine in Australia	College of Emergency Nursing Australasia (CENA), the Australian College of Emergency Nursing (ACEN) and the Australasian College for Emergency Medicine (ACEM).	3355	Complete sample (all members of sample frame invited to participate in survey)	Email	Website / online	De novo survey, with some testing or question improvement process	11 / 2009-12 / 2009

Non-Pharmacological Interventions

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
411-Eastwood-2009; 444-Eastwood-2010	Australia	examine the Australian public's understanding of pandemic influenza, its expressed willingness to comply with public health containment measures, and factors influencing compliance.	Hypothetical event (first survey hypothetical pandemic influenza; second survey real event: H1N1)	general population of Australia	Australians aged 18 years and over	latest Australian telephone database available electronically, the 2002 Electronic White Pages	NR	Random sample	letter	Telephone	De novo survey, no information on validation, testing, or question improvement	06 / 2007
413-Hawryluck-2004	Canada	Assess the level of knowledge about quarantine and infection control measures of persons who were placed in quarantine, explore ways by which these persons received information, to evaluate the level of adherence to public health recommendations, and understand the psychological effect on quarantined persons	Real event (SARS outbreak)	quarantined persons	persons with an epidemiologic exposure to SARS instructed to remain in voluntary quarantine	persons with an epidemiologic exposure to SARS instructed to remain in voluntary quarantine	15000	Complete sample (all members of sample frame invited to participate in survey)	media releases, posting in local healthcare institutions, libraries, and supermarkets	Website / online	Previous survey, cited & validated	NR
416-Kavanagh-2011; 417-Kavanagh-2012	Australia	The survey probed participants' understanding of the quarantine recommendations, the information sources used to gain this understanding, and the perceived usefulness of those sources	Real event (H1N1)	children placed in voluntary home quarantine	Victorian households with children who were placed in voluntary home quarantine during the contain phase of the pH1N1 outbreak	schools that were known or suspected to have implemented closures and asked children to enter quarantine	33 schools; 1188 families	Complete sample (all members of sample frame invited to participate in survey)	Letter	Website / online	De novo survey, no information on validation, testing, or question improvement	11 / 2009-12 / 2009

Non-Pharmacological Interventions

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
418-Ko-2006	Taiwan	to evaluate the psychological state of subjects after the SARS outbreak, and to provide the results of subjects' psychological coping capabilities.	Real event (SARS outbreak)	general population	inclusion in the telephone book	telephone book	NR	Random sample	Telephone	Telephone	Previous survey, cited & validated	07 / 2003
421-Liu-2012; 432-Wu-2009; 433-Wu-2008	China	Examines the relationship between specific types of exposure of Beijing hospital employees to the city's SARS outbreak and their subsequent levels of depressive symptoms and (2) assesses the role of perceived SARS-related risk and altruistic acceptance of risk in levels of depressive symptoms 3 years later, controlling for other factors including levels of PTSD symptoms.	Real event (SARS epidemic)	hospital employees	employees of a major Beijing hospital	employee rosters	~3000	Random sample	NR	NR	Previous survey, cited & validated	2006
422-Marjanovic-2007	Canada	examine the relationship between psychosocial variables and working conditions, and nurses' subjective experiences of SARS stress.	Real event (SARS epidemic)	nurses	Canadian nurses who worked in healthcare facilities during the SARS crisis of 2003.	Registered Nurses' Association of Ontario (RNAO) members	NR	Complete sample (all members of sample frame invited to participate in survey)	Website / online	Website / online	Previous survey, cited & validated	03 / 2004-04 / 2004

Non-Pharmacological Interventions

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
423-McVernon-2011	Australia	characterize the implementation of a quarantine intervention and quantify adherence to behavioral and pharmaceutical recommendations	Real event (H1N1 outbreak)	general population students	students at schools that had closures for quarantine during the H1N1 outbreak in the state of Victoria	students at schools that had closures for quarantine during the H1N1 outbreak in the state of Victoria	1181	Complete sample (all members of sample frame invited to participate in survey)	Letter	Website / online	De novo survey, no information on validation, testing, or question improvement	05 / 2009-06 / 2009
425-Reynolds-2008	Canada	describe quarantined adults' understanding of the rationale for quarantine, difficulties, compliance and the psychological impact of the quarantine experience	Real event (SARS outbreak)	quarantined adults	Community-living adults aged >=18 years who were placed into quarantine, remained well, and were followed for at least two full days by the DRHD	NR	1950	Complete sample (all members of sample frame invited to participate in survey)	letter	Letter	Previous survey, cited & validated; De novo survey, no information on validation, testing, or question improvement	07 / 2003
427-Seale-2009	Australia	To ascertain the beliefs, perceived risks and initial attitudes of the Australian community towards the influenza pandemic declared by the World Health Organization in response to the emergence of an A(H1N1) influenza subtype.	Real event (H1N1 outbreak)	general public	anyone in Sydney >= 18 years old	members of the public in shopping and pedestrian malls in seven geographically and socioeconomically diverse areas of Sydney	584	Other (One of us (HS) spent 2 hours in each area at randomly chosen times of the day to recruit participants. The survey was also made available to members of the public by email during the study period.)	Email	Email; In person	De novo survey, no information on validation, testing, or question improvement	05 / 2009

Non-Pharmacological Interventions

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
431-Tracy-2009	Canada	the objective of the present study was to determine prevailing public attitudes toward the use of quarantine as a means of infectious disease control.	Real event (SARS outbreak)	general population	minimum age of 18 years, primary residence located within the study area during the SARS outbreak, English comprehension skills, and ability to provide informed consent	residents of Toronto or York	3400000	Random sample	Telephone	Telephone	De novo survey, no information on validation, testing, or question improvement	04 / 2005-05 / 2005
465-Porten-2006	Germany	To assess the amount of extra resources necessary to implement control measures as well as other information relevant for the planning of response strategies for future outbreaks	Real event (SARS outbreak)	local health departments	local health department in Germany	all local health departments in Germany	425	Complete sample (all members of sample frame invited to participate in survey)	unclear, just says that they "sent" them surveys	unclear, just says that they "sent" surveys	De novo survey, no information on validation, testing, or question improvement	07 / 2003
469-Teh-2012	Australia	characterize the secondary attack rate (SAR) and the impact of pH1N1 influenza and compare this to non-H1N1 influenza A	Real event (H1N1 outbreak)	general population exposed to H1N1	individuals with laboratory-confirmed influenza A including pH1N1 influenza, patients with an ILI, and their household contacts, who presented for medical attention between 30th April to 31st July, 2009.	emergency department, outpatient, and inpatient hospital records	NR	Other (semi-random)	Telephone	Telephone	De novo survey, no information on validation, testing, or question improvement	07 / 2009-11 / 2009

Non-Pharmacological Interventions

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
605-Bauerle Bass-2010	US	investigate factors that may influence an individual's decision to comply with a quarantine order	Hypothetical event (avian influenza pandemic)	general population	adult Pennsylvania residents	random digit dialing	NR	Random sample	Telephone	Telephone	Previous survey, cited & validated	09 / 2006
606-Blake-2010	US	assess the relative independent contribution of selected employment and sociodemographic characteristics on working adults' ability to comply with pandemic influenza mitigation strategies involving workplace isolation.	Hypothetical event (pandemic influenza.)	General population	adults >18 years of age, who lived in the United States		NR	Random sample	Telephone	Telephone	Previous survey, cited & validated	09 / 2006-10 / 2006
607-Blendon-2006	US, Hong Kong, Singapore, Taiwan	To determine general public attitudes towards quarantine	Hypothetical event (SARS, smallpox, or avian flu)	General public	Adults 18 or older	US: Random digit dialing system; Singapore: random selection of telephone numbers from telephone directory of listed phone numbers (>90% of all households); Hong Kong: random selection of listed telephone numbers with 'an additional 20% of all numbers generated from directory-assisted random digits; Taiwan: random selection of phone numbers from phone directory and randomized last two digits to capture unlisted households	NR	Random sample	Telephone	Telephone	De novo survey, with some testing or question improvement process	11 / 2004-12 / 2004

Non-Pharmacological Interventions

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
613-Kelly-2015	US	levels of perceived Ebola threat, perceptions and beliefs about possible Ebola-related policies, such as mandatory quarantine and travel bans.	Real event (Ebola outbreak)	General population of US	U.S. residents age 18 and older.	GfK KnowledgePanel® consists of 50,000 adult panel members recruited by address-based sampling (ABS). The GfK KnowledgePanel® is based on probability sampling covering both online and offline populations in the U.S.	3222 randomly selected members	Random sample	NR	Website / online	Developed based on existing framework in the literature (e.g., CDC Capabilities)	12 / 2014
624_Katz-2019	US	to understand factors influencing health departments' decision making when choosing whether to implement social distancing measures	Real event (over past 10 years)	U.S. health departments	U.S. health departments	National Association of County and City Health Officials	600	Random sample	Email	Website / online	De novo survey, no information on validation, testing, or question improvement	06 / 2015-12 / 2015

NR = not reported; NA = not applicable

Non-Pharmacological Interventions

Risk of bias / Quality

Risk of bias / Quality

PDF name	Adequacy of survey tool development	Study population (eligibility criteria) prespecified and uniformly applied?	Adequacy and appropriateness of polling / sampling methodology	Respondents non-representative of the target population	Percent who responded	Information on margin of error reported
354_Adler-2018	Unclear RoB[1]	Unclear RoB[1]	Low RoB	Low RoB	76%	Unclear RoB[1]
399-Taylor-Clark-2005	Low RoB	Low RoB	Low RoB	Unclear RoB[1]	65	Unclear RoB[1]
403-Wray-2012	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	29.8%	Unclear RoB[1]
409-Considine-2011	Low RoB	Low RoB	Low RoB	High RoB[8]	18.4	Unclear RoB[1]
411-Eastwood-2009; 444-Eastwood-2010	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	97	Unclear RoB[1]
413-Hawryluck-2004	Low RoB	Low RoB	Low RoB	Unclear RoB[6]	0.86%	Unclear RoB[1]
416-Kavanagh-2011; 417-Kavanagh-2012	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	27	Unclear RoB[1]
418-Ko-2006	Low RoB	Low RoB	Low RoB	Low RoB	93	Unclear RoB[1]
421-Liu-2012; 432-Wu-2009; 433-Wu-2008	Low RoB	Low RoB	Low RoB	Low RoB	83	Unclear RoB[1]
422-Marjanovic-2007	Low RoB	Low RoB	Low RoB	Low RoB	NR	Unclear RoB[1]
423-McVernon-2011	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	27	Unclear RoB[1]
425-Reynolds-2008	Unclear RoB[2]	Low RoB	Low RoB	Low RoB	55.3	Unclear RoB[1]
427-Seale-2009	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	79	Unclear RoB[1]
431-Tracy-2009	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	100	Unclear RoB[1]
465-Porten-2006	Unclear RoB[3]	Low RoB	Low RoB	Low RoB	66	Unclear RoB[1]
469-Teh-2012	Unclear RoB[1]	Low RoB	Unclear RoB[1]	Low RoB	100	Unclear RoB[1]
605-Bauerle Bass-2010	Low RoB	Low RoB	Low RoB	Low RoB	100%	Low RoB (+ / - 2.8%)
606-Blake-2010	Low RoB	Low RoB	High RoB[7]	Low RoB	36	Low RoB (+ / - 2.4%)
607-Blendon-2006	Unclear RoB[4]	Low RoB	Low RoB	Low RoB	NR	Unclear RoB[1]
613-Kelly-2015	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	33	Unclear RoB[1]
624_Katz-2019	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	25	Unclear RoB[1]

Footnotes

1. No information

Non-Pharmacological Interventions

Risk of bias / Quality

2. Some parts validated; others unclear
3. Not validated or pre-tested, but most information probably came from records
4. Some information on survey development, but incomplete (only tested for question length and to insure informational objectives met). Not formal validity testing
5. No comparison with non-respondents or target population
6. Actual number of respondents is low compared to the total number of persons who were placed into quarantine and therefore may not be representative of the entire group of quarantined persons
7. Did not include interviews with cell phone only adults
8. Low response rate could skew sample

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Outcomes

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
354_Adler-2018	Acceptability (acceptance of or compliance with the intervention)		Attitudes toward quarantine: I used my time wisely during the 21-day controlled monitoring	yes / no	
354_Adler-2018	Acceptability (acceptance of or compliance with the intervention)		Attitudes toward quarantine: I would not want to deploy on a mission like this again because of the 21-day controlled monitoring	yes / no	
354_Adler-2018	Acceptability (acceptance of or compliance with the intervention)		Attitudes toward quarantine: Preventive medicine measures recommended for this deployment are not practical	yes / no	
354_Adler-2018	Acceptability (acceptance of or compliance with the intervention)		Attitudes toward quarantine: Taking our temperature twice a day is a waste of time	yes / no	
354_Adler-2018	Acceptability (acceptance of or compliance with the intervention)		Attitudes toward quarantine: Taking our temperature twice a day makes sense to me	yes / no	
354_Adler-2018	Acceptability (acceptance of or compliance with the intervention)		Attitudes toward quarantine: The 21-day controlled monitoring period …	8 subquestions, each one with a Likert scale. Did not report full Likert scale (likely 5 point); results report those who answered agree or strongly agree. (Will reduce anxiety in our communities, Is understandable, Will help keep our families safe, Will help keep our communities safe, Will help me transition home more easily Is a good idea, Is a waste of time, Should be a part of every deployment)	
354_Adler-2018	Feasibility (barriers to implementation of the practice and ability to overcome them)		Health-promoting leadership behaviors: Rate how often your leaders …	13 subquestions each one with a Likert scale. Did not report full Likert scale (likely 5 point); results report those who answered often or always. (Emphasize taking care of yourself physically, Emphasize maintaining professional standards, Place command emphasis on importance of prev. med. measures, Emphasize taking care of yourself mentally, Lead by example by using prev. med. measures themselves, Encourage Soldiers to remind each other to use preventive medicine measures, Emphasize the importance of the humanitarian mission, Encourage you to get enough sleep, Remind you to take a break / recharge, Give you positive feedback about your accomplishments, Reduce tension in the team / unit when emotions run high, Give you specific guidance on how to improve, Emphasize maintaining compassion	
399-Taylor-Clark-2005	Values and preferences		attitudes leading to opposition of compulsory policy	yes / no across 12 attitudes	
399-Taylor-Clark-2005	Acceptability (acceptance of or compliance with the intervention)		opposed to mandatory quarantine policy	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
399-Taylor-Clark-2005	Acceptability (acceptance of or compliance with the intervention)		opposed to mandatory vaccination policy	yes / no	
399-Taylor-Clark-2005	Values and preferences		predictors of distrust of government (demographic factors)	OR (95% CI)	
399-Taylor-Clark-2005	Values and preferences		predictors of opposition of compulsory policy (demographic factors)	OR (95% CI)	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		Financial problems in 6-d quarantine	Categorical: Yes, No	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		In danger from others at POD	Categorical: Yes, No	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		May be unable to get needed drugs	Categorical: Yes, No	
403-Wray-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		More likely to stay home if news	Categorical: Yes, No	
403-Wray-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		More likely to stay home if phone access	Categorical: Yes, No	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		Not enough supplies	Categorical: Yes, No	
403-Wray-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Trust local sources	Categorical: Yes, No	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		Will have to wait in long lines at POD	Categorical: Yes, No	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		Worried about enough medicine at POD	Categorical: Yes, No	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		Worried about exposure to plague by others at POD	Categorical: Yes, No	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		Would be hard to stay home	Categorical: Yes, No	
403-Wray-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		Would be home at 10 AM	Categorical: Yes, No	
403-Wray-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Would rely on government sources	Categorical: Yes, No	
403-Wray-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Would rely on local sources	Categorical: Yes, No	
403-Wray-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Would rely on media sources	Categorical: Yes, No	
409-Considine-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		closure of children's school cause for absenteeism	yes / no	
409-Considine-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		risk of being quarantined cause of absenteeism	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
411-Eastwood-2009	Other interesting, specify ...	Knowledge	all questions	got correct answer	
411-Eastwood-2009	values and preferences		Best option for more information on pandemic flu	Categorical list: general practitioner, accessing an official web site, telephoning a health hotline, and contacting the public health unit	
411-Eastwood-2009	Other interesting, specify ...	knowledge	familiar with the term pandemic flu or pandemic influenza	yes / unsure / no	
411-Eastwood-2009	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		have current leave entitlement from work (2 or 4 weeks)	yes / no	
411-Eastwood-2009	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		have food storage for <= 7 days	yes / no	
411-Eastwood-2009	values and preferences		Having someone who could care for them if they were in home quarantine.	yes / no	
411-Eastwood-2009	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		household occupant requiring daily medication	yes / no	
411-Eastwood-2009	Intermediate - adherence with quarantine		If town or neighborhood were placed in quarantine, would stay within the quarantine area	4-point Likert scale	
411-Eastwood-2009	Other interesting, specify ...	Knowledge	if "(a) all ages could be affected; or if (b) the young and elderly were most likely to be affected"	got correct answer	
411-Eastwood-2009	Other interesting, specify ...	Knowledge	if the disease "(a) could spread within a single country; or (b) spread through all countries"	got correct answer	
411-Eastwood-2009	Other interesting, specify ...	Knowledge	if the disease "(a) is easily spread by coughing and shaking hands; or (b) not"	got correct answer	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
411-Eastwood-2009	Other interesting, specify ...	Knowledge	if the disease "(a) was usually mild and rarely caused death; or (b) could be serious with some deaths expected"	got correct answer	
411-Eastwood-2009	values and preferences	risk perception	if they considered it likely that pandemic influenza would occur in Australia in the next 5 years	4-point Likert scale	
411-Eastwood-2009	values and preferences		If told you might have had contact with pandemic influenza, would you stay home 7–10 days to avoid exposing others?	yes / no	asked at beginning and end of interview
411-Eastwood-2009	values and preferences		If told you needed to avoid public events, would you?	yes / no	asked at beginning and end of interview
411-Eastwood-2009	values and preferences		If told you needed to postpone social gatherings, would you?	yes / no	asked at beginning and end of interview
411-Eastwood-2009	values and preferences		own thermometer	yes / no	
411-Eastwood-2009	values and preferences		preferred method for receiving detailed information on important health issues	Categorical list: television, mail, Internet, radio, newspapers, and other	
411-Eastwood-2009	values and preferences		The person most trusted to provide reliable health information to the media	Categorical list: state / territory chief medical officer, a local health spokesperson, the Prime Minister, the state premier / chief minister	
411-Eastwood-2009	Other interesting, specify ...	Knowledge	whether there had been cases of pandemic influenzas in last 5 years	got correct answer	
411-Eastwood-2009	acceptability (acceptance of or compliance with the intervention)		willing to avoid air travel for a month if requested	yes / no	
411-Eastwood-2009	acceptability (acceptance of or compliance with the intervention)		willing to present to a special assessment clinic as requested instead of to their general practitioner if they thought they had pandemic influenza	yes / no	
411-Eastwood-2009	Acceptability (acceptance of or compliance with the intervention)		willing to take antiviral medication	yes / no	
411-Eastwood-2009	Acceptability (acceptance of or compliance with the intervention)		willing to wear a surgical type mask when mixing with people in public if asked to do so	yes / no	
411-Eastwood-2009	Intermediate - adherence with quarantine		would keep the children away from others for one month if schools and child-care facilities were closed	yes / no	
413-Hawryluck-2004	Intermediate - adherence with quarantine		Adherence to specific quarantine measures	Categorical list: wore a mask in the presence of household members, remained inside their residence for the duration of their quarantine, monitored their temperatures as recommended	
413-Hawryluck-2004	Values and preferences		belief that they would contract SARS	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
413-Hawryluck-2004	Values and preferences		concerned that a quarantined family member would infect someone else in the home	yes / no	
413-Hawryluck-2004	Intermediate - adherence with quarantine		Duration of quarantine	Median (range) days	
413-Hawryluck-2004	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		had experiences that made them feel that people were reacting differently to them	Categorical list: felt that friends were avoiding them, not calling them, not inviting them to events, not inviting their families to events,	
413-Hawryluck-2004	values and preferences		had received adequate information	yes / no	healthcare workers vs non healthcare workers
413-Hawryluck-2004	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact - depression	Mean (SD) CES-D score; % above / below 16	analysis by marital status, income, and duration of quarantine
413-Hawryluck-2004	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact - PTSD	Mean (SD) IES-R score; % above / below 20	analysis by marital status, income, and duration of quarantine
413-Hawryluck-2004	Other interesting, specify ...	source of information	received their information regarding infection control measures to be adhered to during their quarantine	Categorical list: media, public health authorities, occupational health department, healthcare providers, word-of-mouth, hospital Web sites, and other Web sites	
413-Hawryluck-2004	values and preferences		Understand reason for quarantine	Categorical list: believed they were quarantined to prevent them from transmitting infection to others, believed they were quarantined to protect themselves from infection, did not believe they should have been placed into quarantine at all	
413-Hawryluck-2004	Values and preferences		worried that would infect family members	yes / no	
416-Kavanagh-2011	Acceptability (acceptance of or compliance with the intervention)		Compliance	Full compliance overall and by answers to understanding and source of information questions (ORs also given for the latter)	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
416-Kavanagh-2011	Acceptability (acceptance of or compliance with the intervention)		Compliance	Full compliance overall and by answers to paid leave questions (ORs also given for the latter)	
416-Kavanagh-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		financial problem: borrow money	yes / no	
416-Kavanagh-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		financial problem: other financial problems	yes / no	
416-Kavanagh-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		financial problems: difficulty paying a bill	yes / no	
416-Kavanagh-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		financial problems: difficulty paying the mortgage or rent	yes / no	
416-Kavanagh-2011	Other interesting, specify ...	Sources of information	information source	Categorical list: School, Health Department, Media (newspaper / TV), GP / other healthcare provider, Family / friends, Other	
416-Kavanagh-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		lost pay as a result of taking time off work to care for quarantined children	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
416-Kavanagh-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		parent cared for their quarantined child during school hours	yes / no	
416-Kavanagh-2011	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		parent took time off work to care for their child	yes / no	
416-Kavanagh-2011	Other interesting, specify ...	Knowledge	understood what they were meant to do during the quarantine period	yes / no	
416-Kavanagh-2011	values and preferences		Usefulness of information sources	Categorical list: School, Health Department, Media (newspaper / TV), GP / other healthcare provider, Family / friends, Other	
418-Ko-2006	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Depression	yes / no	
418-Ko-2006	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Depression level	Mean (SD): sum of 18 items, ranked 0-3, with higher score = worse	comparison between impacted (people who were or had family quarantined) and non-impacted; also regressions done by group and demographic factors
418-Ko-2006	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		economic impact	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
418-Ko-2006	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Isolated behavior	yes / no	
418-Ko-2006	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Neighborhood relationships	Mean (SD): sum of 5 questions, higher score = better	comparison between impacted (people who were or had family quarantined) and non-impacted; also regressions done by group and demographic factors
418-Ko-2006	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Self-perceived health	Mean (SD): sum of 3 questions, higher = better	comparison between impacted (people who were or had family quarantined) and non-impacted; also regressions done by group and demographic factors
421-Liu-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		depressive symptoms	percent with CES-D score <16 (Likert scale 0-3; score range 0-60; higher = worse)	single and multivariate models
421-Liu-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		depressive symptoms	percent with CES-D score 16-24 (Likert scale 0-3; score range 0-60; higher = worse)	single and multivariate models
421-Liu-2012	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		depressive symptoms	percent with CES-D score >=25 (Likert scale 0-3; score range 0-60; higher = worse)	single and multivariate models

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
422-Marjanovic-2007	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		avoidance behavior	6 questions ranked 1-4 (Pearson product–moment correlations, Standardized beta coefficients, t-statistics, and p-values)	predictors: three psychosocial variables (vigor, organizational support, and trust in equipment / infection control initiatives) and two working conditions variables (contact with SARS patients, and time spent in quarantine)
422-Marjanovic-2007	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		emotional exhaustion	MBI-GS (Pearson product–moment correlations, Standardized beta coefficients, t-statistics, and p-values)	predictors: three psychosocial variables (vigor, organizational support, and trust in equipment / infection control initiatives) and two working conditions variables (contact with SARS patients, and time spent in quarantine)
422-Marjanovic-2007	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		state anger	STAXI (Pearson product–moment correlations, Standardized beta coefficients, t-statistics, and p-values)	predictors: three psychosocial variables (vigor, organizational support, and trust in equipment / infection control initiatives) and two working conditions variables (contact with SARS patients, and time spent in quarantine)
423-McVernon-2011	Intermediate - adherence with quarantine		a child mixed with other children	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		a child spent at least one day outside the family home	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		adult visitors in homes without a case	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		at least one quarantined family member left the home to visit "an outdoor public space with lots of other people around (e.g. playground or market)	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		child visitors in homes with a case	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		child visitors in homes without a case	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
423-McVernon-2011	Intermediate - adherence with quarantine		Compliance with antiviral medication	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		Individual compliance with the recommendation to stay at home	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		remained at home during all days of their prescribed quarantine period	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		reported an excursion to an enclosed public space, other than for medical attendance	yes / no	
423-McVernon-2011	Health - morbidity and mortality		Reported side effects of medication	yes / no	
423-McVernon-2011	Intermediate - adherence with quarantine		where spent time outside home during quarantine days	Categorical list: homes of friends, at school, in the workplace, 'Other' unspecified locations	
425-Reynolds-2008	Intermediate - adherence with quarantine		Compliant with all community protective measures	Categorical list: Did not go out of house to socialize, Did not attend important events, Did not go on vacation, Used mask for home health-care visits, Did not run errands outside of home, Used mask for any health-care visits, Used mask when answer door, Did not allow visitors into home, Used mask outdoors when others present, Did not go for a drive	
425-Reynolds-2008	Intermediate - adherence with quarantine		Compliant with all household protective measures	Categorical list: Used separate towels, Used separate cutlery, Slept in separate room by themselves, Used mask when household member present	
425-Reynolds-2008	Intermediate - adherence with quarantine		Compliant with all protective measures	yes / no	
425-Reynolds-2008	Intermediate - adherence with quarantine		Compliant with all quarantine requirements	yes / no	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	values and preferences		Correct understanding of rationale for quarantine	yes / no	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Acceptability (acceptance of or compliance with the intervention)		Difficulty score	Mean (SD) sum of ordinal scores of "most common difficulties" question	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Intermediate - adherence with quarantine		Duration of quarantine	Mean (SD, range) days	self-report vs DRHD database; healthcare workers vs non healthcare workers; SARS phase

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		household income declined	yes / no	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	acceptability (acceptance of or compliance with the intervention)		Most common difficulties	Categorical list: Not going out of house to socialize, Not going out of house on errands, Using mask when household member present, Taking care of children (if in household), Staying in room by self with door closed	
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: Behaviors after quarantine	Categorical list: Avoided people coughing or sneezing, People reacted differently, Avoided crowded enclosed public places, Avoided public places	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: feelings	Categorical list: Boredom, Isolation, Frustration, Annoyance, Worry, Loneliness, Helplessness, Anger, Fear, Nervousness, Sadness, Guilt, Happiness, Relief	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: PTSD	IES-R score >= 20	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: PTSD	Mean (SD) IES-R	healthcare workers vs non healthcare workers; SARS phase

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: PTSD	Mean (SD) IES-R: Avoidance subscale	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: PTSD	Mean (SD) IES-R: Intrusion subscale	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: PTSD	Mean (SD) IES-R: Hyperarousal subscale	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Psychological impact: SARS concerns	Categorical list: Knew someone hospitalized / died from SARS, Temperature taken >3 times per day, Concerned about infecting others, Thought had SARS	healthcare workers vs non healthcare workers; SARS phase
425-Reynolds-2008	values and preferences		Understanding of rationale for quarantine	Categorical list: Quarantine protects self, Quarantine protects household, Quarantine protects community, All correct	
427-Seale-2009	values and preferences		agreed that "health authorities are exaggerating the risk of a pandemic"	yes / no	
427-Seale-2009	other interesting, specify ...	knowledge	Are you aware of the swine flu situation?	yes / no	
427-Seale-2009	acceptability (acceptance of or compliance with the intervention)		being placed in home quarantine would constitute an inconvenience or problem	high or very high vs other	
427-Seale-2009	values and preferences		believed that health authorities would be truthful about what was happening during an influenza pandemic	yes / no	
427-Seale-2009	values and preferences		believed that the government would be prepared to quickly and effectively respond to an influenza pandemic	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
427-Seale-2009	values and preferences		Do you feel that you currently have enough information about the swine flu situation?	yes / no	
427-Seale-2009	values and preferences		How long do you think a pandemic will last?	Categorical list: < 1 month, 1–2 months, 3–6 months, 6 months – 1 year, 1–2 years, > 2 years, Unsure, Other	
427-Seale-2009	values and preferences		If you were infected by pandemic influenza, how seriously do you think it would affect your health?	4-point Likert scale	
427-Seale-2009	acceptability (acceptance of or compliance with the intervention)		Not being able to attend work is a highly problematic aspect of quarantine	yes / no	
427-Seale-2009	acceptability (acceptance of or compliance with the intervention)		not having access to groceries and other supplies is a highly problematic aspect of quarantine	yes / no	
427-Seale-2009	values and preferences		Perceived efficacy of various prevention methods for pandemic influenza	0-100% effective across 8 domains	
427-Seale-2009	values and preferences		Please indicate your level of risk of catching influenza during a pandemic	5-point Likert scale	
427-Seale-2009	acceptability (acceptance of or compliance with the intervention)		whether or not they would take a prophylactic course of antiviral drugs, or give it away to their family members, in the event that they were exposed to a person with pandemic influenza	yes / no	
431-Tracy-2009	Values and preferences		Government should pay for counselors and support groups so that people coming out of Qx have someone to talk to about it	5-point Likert scale	
431-Tracy-2009	Values and preferences		Government should pay for nurses and counselors to help people who are in Qx	5-point Likert scale	
431-Tracy-2009	Values and preferences		If I go into Qx, my family / friends / community will be protected from becoming sick	5-point Likert scale	
431-Tracy-2009	Values and preferences		If someone is given a Qx order by Public Health, they should follow it no matter what else is going on in their life at work or home	5-point Likert scale	
431-Tracy-2009	Values and preferences		It is reasonable for some rights to be taken away during an infectious disease outbreak	5-point Likert scale	
431-Tracy-2009	Values and preferences		People in Qx should get money from the government to pay for missed time at work	5-point Likert scale	
431-Tracy-2009	Values and preferences		People who break Qx orders on purpose should face legal penalties like a fine or jail	5-point Likert scale	
431-Tracy-2009	Values and preferences		People who disagree with their Qx order should be able to request a review to have it ended early	5-point Likert scale	
431-Tracy-2009	Values and preferences		Public Health needs to explain to everyone why they should be allowed to use Qx	5-point Likert scale	
431-Tracy-2009	Values and preferences		Public Health should be able to lock people up if they fail to obey Qx orders	5-point Likert scale	
431-Tracy-2009	Values and preferences		Public Health should ensure that people have food and shelter while in Qx, and pay for it with public money if need be	5-point Likert scale	
431-Tracy-2009	Values and preferences		Public Health should ensure that there is no discrimination in the use of Qx	5-point Likert scale	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
431-Tracy-2009	Values and preferences		Public Health should have the power to order people into Qx during outbreaks	5-point Likert scale	
431-Tracy-2009	Values and preferences		Public Health should use electronic bracelets and in-home surveillance cameras for people who disobey Qx orders	5-point Likert scale	
431-Tracy-2009	Values and preferences		Qx is a good way to stop the spread of infectious disease outbreaks	5-point Likert scale	
432-Wu-2009	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		current fear of future SARS outbreak	Mean (SD): scale range 1-5 (higher = worse)	single and multivariate models
432-Wu-2009	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		post-traumatic stress symptoms	percent of employees with high levels of PTS symptoms (IES-R score >= 20)	single and multivariate models
432-Wu-2009	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		post-traumatic stress symptoms	Mean IES-R score (higher = worse)	single and multivariate models
433-Wu-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		alcohol abuse / dependence symptoms	Number of symptoms (range 0-6)	single and multivariate models
433-Wu-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		alcohol abuse / dependence symptoms	percent of employees with at least 1 symptom	single and multivariate models

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
433-Wu-2008	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		alcohol abuse / dependence symptoms	percent of employees with at 2 or more symptoms	single and multivariate models
444-Eastwood-2010	Intermediate - adherence with quarantine		amount of disruption as a result of public health containment measures enacted during the containment phase	4-point Likert scale	
444-Eastwood-2010	values and preferences		Commons sources sought for information on pandemic flu	Categorical list: general practitioners, other healthcare workers, government websites, public health department, national health hotline	
444-Eastwood-2010	values and preferences		concern that they or a member of their family may become infected	4-point Likert scale	
444-Eastwood-2010	other interesting, specify ...	risk perception	considered themselves to be in a group at risk for more severe illness or higher likelihood of infection	yes / no	
444-Eastwood-2010	other interesting, specify ...	knowledge	cough and rash are typical of swine flu	got correct answer	
444-Eastwood-2010	Intermediate - adherence with quarantine		covering coughs and sneezes	yes / no	
444-Eastwood-2010	other interesting, specify ...	knowledge	handwashing and using a tissue to cover your mouth when coughing are practical ways of reducing the spread of flu	got correct answer	
444-Eastwood-2010	values and preferences		health authorities had provided sufficient information on swine flu	yes / no	
444-Eastwood-2010	Intermediate - adherence with quarantine		Increased handwashing	yes / no	
444-Eastwood-2010	other interesting, specify ...	knowledge	number of cases of H1N1 in Australia	got correct answer	
444-Eastwood-2010	values and preferences		perception of disease severity	mild, moderate, severe	
444-Eastwood-2010	Intermediate - adherence with quarantine		purchased (not just been prescribed) an antiviral drug such as Tamiflu or Relenza	yes / no	
444-Eastwood-2010	Intermediate - adherence with quarantine		purchased masks / worn a mask in public	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
444-Eastwood-2010	acceptability (acceptance of or compliance with the intervention)		Saw media messages	yes / no	
444-Eastwood-2010	Intermediate - adherence with quarantine		spent more time than usual cleaning the house	yes / no	
444-Eastwood-2010	other interesting, specify ...	knowledge	swine flu never seriously affects people who have good health	got correct answer	
444-Eastwood-2010	other interesting, specify ...	knowledge	swine flu spreads very easily in the community	got correct answer	
444-Eastwood-2010	Acceptability (acceptance of or compliance with the intervention)		whether media information had changed any of their behavior	yes / no	
444-Eastwood-2010	acceptability (acceptance of or compliance with the intervention)		Willingness to comply: Avoid public events for 1 mo.	yes / no	in both surveys; analyzed by sex, age, experience, concern, educations
444-Eastwood-2010	acceptability (acceptance of or compliance with the intervention)		Willingness to comply: Avoid social gatherings for 1 mo.	yes / no	in both surveys; analyzed by sex, age, experience, concern, educations
444-Eastwood-2010	acceptability (acceptance of or compliance with the intervention)		Willingness to comply: Home quarantine for 1 wk. if exposed	yes / no	in both surveys; analyzed by sex, age, experience, concern, educations
444-Eastwood-2010	acceptability (acceptance of or compliance with the intervention)		Willingness to comply: Local quarantine of an affected area	yes / no	in both surveys; analyzed by sex, age, experience, concern, educations
444-Eastwood-2010	acceptability (acceptance of or compliance with the intervention)		Willingness to comply: Wear a surgical mask in public	yes / no	in both surveys; analyzed by sex, age, experience, concern, educations
465-Porten-2006	Intermediate - adherence with quarantine		Duration of quarantine	Mean, most frequent, and second most frequent number of days	
465-Porten-2006	Intermediate - adherence with quarantine		Duration of quarantine	Number quarantined for recommended 10 days	stratified by professional activity
465-Porten-2006	Health - morbidity and mortality		Number in quarantine who became cases	yes / no	
465-Porten-2006	Resource use, including cost		Number of hours worked on the epidemic	Mean number of hours	stratified by whether the LHD reported any cases
465-Porten-2006	Resource use, including cost		Number of hours worked per case	Mean (range) number of hours	
469-Teh-2012	values and preferences		believed it was safe and acceptable to leave the house in breach of quarantine measures as long as contact with other people was limited	yes / no	
469-Teh-2012	values and preferences		believed that quarantine measures were justified	yes / no	
469-Teh-2012	Intermediate - adherence with quarantine		breakdown of activities among nonadherent	Categorical list: <1h, 1-8 h,>8h	
469-Teh-2012	Intermediate - adherence with quarantine		did not report adherence to quarantine measures.	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
469-Teh-2012	Health - morbidity and mortality		Impact of H1N1 / 09, seasonal influenza, and ILI on individuals and households	number of days bed bound, unable to work	
469-Teh-2012	Intermediate - adherence with quarantine		reason for nonadherence	Categorical list: need to work; to attend for medical attention; to buy food; attending an important event; visiting family; believed the diagnosis was not serious	
469-Teh-2012	Health - morbidity and mortality		secondary attack	yes / no	stratified by whether received Oseltamivir; H1N1 or other flu; age; household size
605-Bauerle Bass-2010	values and preferences		How closely have you been following the news in recent months about the avian flu, often called the bird flu?	1-4 (1 very closely, 4 not at all)	
605-Bauerle Bass-2010	values and preferences		How likely do you think it is that bird flu will infect people in the United States?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	values and preferences		How likely do you think it is that you or someone else in your household will get bird flu?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	acceptability (acceptance of or compliance with the intervention)		How likely would you be to go to an emergency facility for 2 weeks if the U S government asked you to do so, even if you were not sick?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	acceptability (acceptance of or compliance with the intervention)		How likely would you be to go to an emergency facility for 2 weeks if the U S government ordered you to do so, even if you were not sick?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	acceptability (acceptance of or compliance with the intervention)		How likely would you be to stay in your home for 2 weeks if the US government asked you to do so, even if you were not sick?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	acceptability (acceptance of or compliance with the intervention)		how willing they would be to comply with various levels of quarantine	1-10 scale (10 very likely)	stratified by age, education level, income, and religiosity
605-Bauerle Bass-2010	values and preferences		If a person eats chicken or other poultry that has been infected, how likely do you think it is that the person will get bird flu?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	values and preferences		If a person is infected with bird flu, how likely do you think it is that a person will die from bird flu?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	values and preferences		If a vaccine—a medicine to protect you from bird flu—were available, how likely would you be to get vaccinated?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	acceptability (acceptance of or compliance with the intervention)		In an epidemic, how likely would you be to choose to stay in your home for 2 weeks, even if you were not sick yourself?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	values and preferences		In general, if a person came into contact with other people who have been infected, how likely do you think it is that the person will get bird flu?	1-10 scale (10 very likely)	
605-Bauerle Bass-2010	acceptability (acceptance of or compliance with the intervention)		likelihood of compliance with the 4 levels of quarantine	1-10 scale (10 very likely)	ANOVA analysis

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
606-Blake-2010	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		If you were asked to stay home for 7–10 days and avoid contact with anyone outside your household, would you or someone in your household lose your job or business?	yes / no	stratified by income, education, race, age, gender health status, urban / rural residence, self-employed, would not be paid if did not go to work, knowledge of pandemic influenza
606-Blake-2010	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Would it become a serious financial problem if you stayed out of work for 7–10 days?	yes / no	stratified by income, education, race, age, gender health status, urban / rural residence, self-employed, would not be paid if did not go to work, knowledge of pandemic influenza
606-Blake-2010	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Would it become a serious financial problem if you stayed out of work for 1 month?	yes / no	stratified by income, education, race, age, gender health status, urban / rural residence, self-employed, would not be paid if did not go to work, knowledge of pandemic influenza
606-Blake-2010	Harms (e.g., impact on public trust, individuals' ability to meet economic or social demands, disparities, individuals' employment and education; psychological and social effects on quarantined individuals)		Would it become a serious financial problem if you stayed out of work for 3 months?	yes / no	stratified by income, education, race, age, gender health status, urban / rural residence, self-employed, would not be paid if did not go to work, knowledge of pandemic influenza
607-Blendon-2006	Values and preferences		Concern about becoming ill with an infectious disease: Have worn a mask in public in the past two years	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Concern about becoming ill with an infectious disease: Very worried that you or someone in family might get sick from SARS in the next twelve months	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Concern about becoming ill with an infectious disease: Very worried that you or someone in family might get sick from regular or seasonal flu in the next twelve months	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Concern about becoming ill with an infectious disease: Very worried that you or someone in family might get sick from Avian or bird flu	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferences for where they would be quarantined: If a family member had to be quarantined, prefer that they be quarantined at home	% yes (not explicit); split by 4 countries	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
607-Blendon-2006	Values and preferences		Preferences for where they would be quarantined: If a family member had to be quarantined, prefer that they be quarantined in a separate facility	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferences for where they would be quarantined: If YOU had to be quarantined, prefer to be quarantined at home	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferences for where they would be quarantined: If YOU had to be quarantined, prefer to be quarantined somewhere else	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferences for where they would be quarantined: If YOU had to be quarantined, still want to be quarantined if you were required to wear a mask at all times	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferences for where they would be quarantined: If YOU had to be quarantined, would rather be quarantined somewhere else if you were required to wear a mask at all times	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferences for where they would be quarantined: Very worried about infecting healthy family members if quarantined at home	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferred sources of information in the event of an epidemic: Trust “a lot” as a source of useful and accurate information about an outbreak, your doctor or other health care professional	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferred sources of information in the event of an epidemic: Trust “a lot” as a source of useful and accurate information about an outbreak, government public health authorities	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferred sources of information in the event of an epidemic: Trust “a lot” as a source of useful and accurate information about an outbreak, newspapers, magazines, TV, or radio	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferred sources of information in the event of an epidemic: Trust “a lot” as a source of useful and accurate information about an outbreak, your employer	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Preferred sources of information in the event of an epidemic: Trust “a lot” as a source of useful and accurate information about an outbreak, a family member or friend	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to monitor compliance with quarantine: Favor or oppose public health officials monitoring quarantined people by periodic telephone calls	% yes favor; % yes oppose (reported as 2 questions); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to monitor compliance with quarantine: Favor or oppose public health officials monitoring quarantined people by periodic video screening	% yes favor; % yes oppose (reported as 2 questions); split by 4 countries	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
607-Blendon-2006	Values and preferences		Support for measures to monitor compliance with quarantine: Favor or oppose public health officials monitoring quarantined people by daily visit to check the health of those who are quarantined	% yes favor; % yes oppose (reported as 2 questions); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to monitor compliance with quarantine: Favor or oppose public health officials monitoring quarantined people by electronic bracelets	% yes favor; % yes oppose (reported as 2 questions); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to monitor compliance with quarantine: Favor or oppose public health officials monitoring quarantined people by guards stationed outside the place where people are quarantined	% yes favor; % yes oppose (reported as 2 questions); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease requiring everyone to wear a mask in public	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease requiring everyone to wear a mask in public (Still favor if people could be arrested for refusing)	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease requiring everyone to wear a mask in public (No longer favor if people could be arrested for refusing)	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease Requiring everyone to have their temperature taken to screen for illness before entering public places	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease Requiring everyone to have their temperature taken to screen for illness before entering public places (Still favor if people could be arrested for refusing)	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease Requiring everyone to have their temperature taken to screen for illness before entering public places (No longer favor if people could be arrested for refusing)	% yes (not explicit); split by 4 countries	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease quarantining people suspected of having been exposed to the disease	% yes (not explicit); split by 4 countries, and within US, split by demographic characteristics (age, income, sex, urbanity, race / ethnicity, education)	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease quarantining people suspected of having been exposed to the disease (Still favor if people could be arrested for refusing)	% yes (not explicit); split by 4 countries, and within US, split by demographic characteristics (age, income, sex, urbanity, race / ethnicity, education)	
607-Blendon-2006	Values and preferences		Support for measures to protect the public: Favor in the event of an outbreak of a serious contagious disease quarantining people suspected of having been exposed to the disease (No longer favor if people could be arrested for refusing)	% yes (not explicit); split by 4 countries, and within US, split by demographic characteristics (age, income, sex, urbanity, race / ethnicity, education)	
607-Blendon-2006	Values and preferences		Worries about quarantine: [Among list of potential problems they might experience if they were quarantined in a designated health care facility, what was their level of worry about each problem)	Scale unclear; study reports top 2 worries per country and the % who responded for that particular worry, categories reported: Being exposed to someone with the disease, Being unable to communicate with family members, The place where you were quarantined would be overcrowded	
607-Blendon-2006	Values and preferences		Worries about quarantine: Worried if YOU had to be quarantined for at least one week, you might be unable to get the health care or Rx you need	% very worried; split by 4 countries	
607-Blendon-2006	Values and preferences		Worries about quarantine: Worried if YOU had to be quarantined for at least one week, you might not get paid for the time when you are not at work	% very worried; split by 4 countries	
607-Blendon-2006	Values and preferences		Worries about quarantine: Worried if YOU had to be quarantined for at least one week, you might lose your job or business	% very worried; split by 4 countries	
607-Blendon-2006	Values and preferences		Worries about quarantine: Worried if YOU had to be quarantined for at least one week, you might be treated unfairly after the quarantine period was over because people will think you are contagious	% very worried; split by 4 countries	
607-Blendon-2006	Values and preferences		Worries about quarantine: Worried if YOU had to be quarantined for at least one week, you might be treated unfairly because of your economic or social status	% very worried; split by 4 countries	
613-Kelly-2015	values and preferences		ability of the U.S. government to prevent the spread of Ebola to the U.S.	confident or very confident	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		avoiding healthcare facilities	yes / no	
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		avoiding public transportation during the holiday season	yes / no	
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		avoiding those who have traveled to West Africa	yes / no	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
613-Kelly-2015	values and preferences		believe anyone who has been exposed to an Ebola patient should be quarantined	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	values and preferences		believe the media has exaggerated the seriousness of Ebola	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	values and preferences		believe U.S. should ban travel from affected countries in West Africa	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	values and preferences		confident in local hospital's ability to treat the illness	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	values and preferences		confident in the media's ability to accurately report on the outbreak	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	values and preferences		confident local hospital could prevent the spread to healthcare workers	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	values and preferences		confident that public health officials were providing the U.S. public with all of the information they need to know about Ebola	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	values and preferences		Ebola would spread to the U.S.	Categorical list: extremely likely, likely, unlikely, neutral	
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		engaging (or planning to engage) in one or more behaviors to prevent contracting Ebola	yes / no	
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		engaging (or planning to engage) in two or more behaviors to prevent contracting Ebola	yes / no	
613-Kelly-2015	values and preferences		felt healthcare workers who are infected with Ebola while treating patients in Africa should be brought to the U.S. for care	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		keeping children home from school or avoiding public places	yes / no	
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		making changes to hygiene practices such as hand washing	yes / no	
613-Kelly-2015	values and preferences		Perceived threat: heart disease, seasonal flu, West Nile virus, EV-D68, Ebola, pandemic flu, ISIS militant group, Superstorms	five point scale (1 = no threat at all; 5 = a very serious threat).	

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
613-Kelly-2015	acceptability (acceptance of or compliance with the intervention)		purchasing self-protective supplies	yes / no	
613-Kelly-2015	other interesting, specify ...	knowledge	To the best of your knowledge, how long could it take for someone to get sick after being exposed to Ebola?	Categorical list: <= 2 days, <= 21 days, <= 28 day, > 28 days	
613-Kelly-2015	other interesting, specify ...	knowledge	To the best of your knowledge, which of the following are ways that Ebola can spread?	Categorical list: Contact with bodily fluids of a person who has been exposed to Ebola but does not yet have symptoms; Contact with blood and bodily fluids of a person who is sick with Ebola; Breathing the same air as a person who is sick with Ebola; Touching public door handles, shopping cart handles, or public toilet seats; Touching the body of someone who has died from Ebola	
613-Kelly-2015	values and preferences		U.S. has provided the appropriate level of support to countries with Ebola outbreaks	yes / no	stratified by gender, age, education, race, income, children in home, US region
613-Kelly-2015	other interesting, specify ...	knowledge	Which of the following statements do you believe is true?	Categorical list: Ebola can only be spread once a person has symptoms; Mosquitoes spread Ebola; There is a new vaccine available for widespread use that can prevent someone from getting Ebola; You should avoid food and drinks imported from West Africa to prevent contracting Ebola; You can get Ebola from your cat or dog	
624-Katz-2019	Feasibility (barriers to implementation of the practice and ability to overcome them)		biggest health concerns about the use of social distancing	Categorical list: public health impact or clinical implications, legal, political, vulnerable populations, financial, sociocultural, and other	stratified by income, population size, percentage rural, border state, political leaning
624-Katz-2019	Feasibility (barriers to implementation of the practice and ability to overcome them)		Concerning the past 10 years (since January 1, 2005), to your knowledge, have voluntary or involuntary orders related to social distancing (including: quarantine, isolation, school closures) been issued in your jurisdiction?	yes / no	stratified by income, population size, percentage rural, border state, political leaning
624-Katz-2019	Feasibility (barriers to implementation of the practice and ability to overcome them)		Do you have an explicit line item in your annual budget for isolation or quarantine measures, if they are deemed appropriate?	yes / no	stratified by income, population size, percentage rural, border state, political leaning
624-Katz-2019	Feasibility (barriers to implementation of the practice and ability to overcome them)		Do you have any existing facilities your health department uses for isolation or quarantine?	yes / no	stratified by income, population size, percentage rural, border state, political leaning
624-Katz-2019	Feasibility (barriers to implementation of the practice and ability to overcome them)		Does your health department have legal authority to make social distancing decisions?	yes / no	stratified by income, population size, percentage rural, border state, political leaning

Non-Pharmacological Interventions

Outcomes (List of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
624-Katz-2019	Feasibility (barriers to implementation of the practice and ability to overcome them)		If faced with a decision to use or not use social distancing measures today, what would be your biggest concern?	yes / no	stratified by income, population size, percentage rural, border state, political leaning

NR = not reported; NA = not applicable

Information Sharing

Study and survey information

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
14_Markiewicz-2012	US	to 1) identify the specific activities carried out by PHEs and the services they provide to three stakeholder groups- LHDs, NCDPH, and the hospitals in which they are based, 2) determine the value of these services to stakeholders, and 3) describe PHEs' role in North Carolina's response to the 2009 novel influenza A (H1N1) pandemic.	Real event (H1N1 pandemic)	public health epidemiologists, communicable disease nurses based at local health departments, North Carolina Division of Public Health staff, and public health epidemiologists' hospital supervisors	Nurses: Sought 'lead' communicable disease and TB control nurses in North Carolina's local health department. Unclear how 'lead' was defined. Key informants at North Carolina Department of Public Health (NCDPH): eligibility not defined.	lead nurses in North Carolina's local health departments	NR	No information / unclear	Email	Website / online	De novo survey, no information on validation, testing, or question improvement	NR

Information Sharing

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
263_Argonne_2010	US	To assess the effectiveness of its communication efforts before the next pandemic wave hit Illinois in fall 2009	Real event (H1N1 outbreak)	key stakeholders	eligible stakeholder groups to participate in the survey: Local health departments Hospitals Private physicians Schools and universities Child care centers Private businesses and associations Nursing homes / long-term care facilities Government agencies (state and non-public-health local government agencies	identifying email addresses for government, hospitals, and private businesses	237	Complete sample (all members of sample frame invited to participate in survey)	Email	Email	De novo survey, with some testing or question improvement process	2009
279_Hunter et al-2012	US	To evaluate the local public health emergency response to the tsunami threat in California	Real event (2011 Tsunami off Japan)	Public health, emergency management agency, and emergency medical services agencies in coastal floodplain areas	representatives from local public health, emergency management agency, and emergency medical services	local health departments, emergency management agency or office of emergency management, and emergency medical services	57 agencies	Other (representatives based on functional role in agency)	Email	Website / online	Developed based on existing framework in the literature (e.g., CDC Capabilities)	08 / 2011-11 / 2011

Information Sharing

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
290_Moriarty-2014	US	To assess immunization program managers' (IPM) perceptions of programs' functional capabilities during and after vaccine shortages and pH1N1	Real event (Haemophilus influenzae type B and pH1N1)	immunization program managers' (IPM) in the US	federal immunization program grantees	federal immunization program grantees	NR	No information / unclear	Email	NR	Previous survey, cited only (no information on validation)	2009-2012
300-Ockers-2011	US	The primary objective of our state-based surveys was to assess preparedness-related issues regarding an emergency involving distribution of a vaccine.	Hypothetical event (emergency involving distribution of a vaccine)	fund providers from Oregon, Louisiana, Washington, California	Eligible practices, defined as those practices who ordered H1N1 vaccine from the State Department of Health	Directory of eligible practices	961	Random sample	Fax	Letter	De novo survey, no information on validation, testing, or question improvement	2009-2011
305_Seidl-2010	Australia	to evaluate the various sources of information and methods of communication in the context of H1N1 emergency response	Real event (H1N1 emergency)	Stakeholders of the EOC of a regional tertiary hospital	All staff of a health department, district disaster management group, and representatives of local general practitioners	Staff email addresses	NR	Convenient sample	Website / online	Email	De novo survey, with some testing or question improvement process	05 / 2009-05 / 2009

Information Sharing

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
321_Dearinger-2011; 278_Howard-2012	US	Assess effectiveness of communication between health departments, community physicians, and pharmacists in Kentucky during the initial outbreak of influenza H1N1.	Real event (H1N1 outbreak)	Local health departments and health care organizations and practitioners	Local health departments, family physicians, pharmacists in Kentucky	Professional association memberships	54 LHDs, 518 family physicians, ~1000 pharmacists	Complete sample (all members of sample frame invited to participate in survey)	Unclear (LHD), fax (MD, Pharm)	Website / online, Fax (MD, Pharm)	Previous survey, cited only (no information on validation), De novo survey, with some testing or question improvement process	8-11 / 2009
327_Quinn-2018	US	To better understand providers' use of information sources related to emerging disease threats	Real event (specify...)	New York City (NYC) healthcare providers	healthcare providers working in NYC during the local health department response to the Zika threat.	all email addresses contained in the NYC DOHMH Provider Data Warehouse	44455	Complete sample (all members of sample frame invited to participate in survey)	Email	Website / online	De novo survey, no information on validation, testing, or question improvement	03 / 2017-06 / 2017
330_Revere-2014	US	To identify the essential components, content and formatting of public health SMS messages	No event	Health care providers	Advanced Registered Nurse Practitioners, Physicians, Physician Assistants, Pharmacists, and Veterinarians	Health care providers already enrolled in another study (that is in a conference abstract, not in the NAS study list)	617	Complete sample (all members of sample frame invited to participate in survey)	Email	Email	De novo survey, no information on validation, testing, or question improvement	NR

Information Sharing

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
331_Santibanez-2016	US	To evaluate communication between public health and physicians from the Infectious Diseases Society of America's (IDSA's)Emerging Infections Network (EIN)	No event	practicing infectious disease physicians	practicing infectious disease physicians	practicing infectious disease physicians from the Infectious Diseases Society of America's (IDSA's) Emerging Infections Network (EIN) from all 50 US states, the District of Columbia and Puerto Rico	1491	Complete sample (all members of sample frame invited to participate in survey)	NR	Website / online	Collaboration with experts for development	05 / 2015-06 / 2015
332_Staes et al-2011	US	(1) assess clinicians' knowledge about public health guidance concerning the detection, treatment, prevention, and control of novel influenza A, and (2) determine clinician preferences and perceptions about communication during a public health emergency	Real event (2009 influenza pandemic)	Clinicians in Utah	office-based primary care clinicians located in urban and rural communities throughout Utah	(1) clinicians affiliated with the University, (2), primary care clinicians employed by or affiliated with Intermountain, an integrated healthcare system, and (3) office based primary care clinicians from small group practices in rural Utah not affiliated with Intermountain or University	509	Complete sample (all members of sample frame invited to participate in survey)	Email	Website / online	De novo survey, no information on validation, testing, or question improvement	05 / 2009-06 / 2009

NR = not reported; NA = not applicable

Information Sharing

Risk of bias / Quality

Risk of bias / Quality

PDF name	Adequacy of survey tool development	Study population (eligibility criteria) prespecified and uniformly applied?	Adequacy and appropriateness of polling / sampling methodology	Respondents non-representative of the target population	Percent who responded	Information on margin of error reported
14_Markiewicz-2012	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[1]	Public health epidemiologists: 100%; communicable disease and TB control nurses: 83%; North Carolina Department of Public Health key informants: NR (4 interviewed / N?); Hospital supervisors: 100%	Unclear RoB[1]
263_Argonne_2010	Low RoB	Low RoB	Low RoB	Low RoB	43%	Unclear RoB[1]
279_Hunter et al-2012	Low RoB	Low RoB	Low RoB	Low RoB	56%	Unclear RoB[1]
290_Moriarty-2014	High RoB[6]	Unclear RoB[1]	Unclear RoB[1]	Unclear RoB[3]	58% (2009); 84% (2010); 95% (2012)	Unclear RoB[1]
300-Ockers-2011	Unclear RoB[1]	Low RoB	Low RoB	Low RoB	NR	Unclear RoB[1]
305_Seidl-2010	Low RoB	Low RoB	Low RoB	Unclear RoB[1]	6%	Unclear RoB[1]
321_Dearinger-2011; 278_Howard-2012	Low RoB	Low RoB	Low RoB	Unclear RoB[1]	LHD 65%, MD 18%, Pharm 21%	Unclear RoB[1]
327_Quinn-2018	Unclear RoB[2]	Low RoB	Low RoB	High RoB[4]	3.2%	Unclear RoB[1]
330_Revere-2014	Unclear RoB[2]	Low RoB	Low RoB	Low RoB	27.2%	Unclear RoB[1]
331_Santibanez-2016	Unclear RoB[2]	Low RoB	Low RoB	High RoB[5]	46%	Unclear RoB[1]
332_Staes et al-2011	Unclear RoB[2]	Low RoB	Low RoB	Unclear RoB[1]	28%	Unclear RoB[1]

Footnotes

1. No information
2. No or incomplete description of development process
3. No comparison with non-respondents or target population
4. Very low response rate
5. likely than nonrespondents to practice pediatric ID, have 15 to 24 years of experience since ID fellowship, or work in a university or medical school
6. wording of questions varied over time

Information Sharing

Outcomes (survey questions)

Outcomes

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
14_Markiewicz-2012	Resource use, including cost		% time assisting LHDs with communicable disease reporting and investigation	proportion	Source: PHEs estimated the time spent on each of their 5 areas of responsibility and listed the activities associated with each. Surveys and / or interviews with LHD-based nurses, NCDPH key informants, and PHEs' hospital supervisors confirmed these activities.
14_Markiewicz-2012	Resource use, including cost		% time conducting special studies	proportion	Source: PHEs estimated the time spent on each of their 5 areas of responsibility and listed the activities associated with each. Surveys and / or interviews with LHD-based nurses, NCDPH key informants, and PHEs' hospital supervisors confirmed these activities.
14_Markiewicz-2012	Resource use, including cost		% time enhancing communication	proportion	Source: PHEs estimated the time spent on each of their 5 areas of responsibility and listed the activities associated with each. Surveys and / or interviews with LHD-based nurses, NCDPH key informants, and PHEs' hospital supervisors confirmed these activities.
14_Markiewicz-2012	Resource use, including cost		% time enhancing educating clinicians	proportion	Source: PHEs estimated the time spent on each of their 5 areas of responsibility and listed the activities associated with each. Surveys and / or interviews with LHD-based nurses, NCDPH key informants, and PHEs' hospital supervisors confirmed these activities.
14_Markiewicz-2012	Resource use, including cost		% time on activities related to surveillance	proportion	Source: PHEs estimated the time spent on each of their 5 areas of responsibility and listed the activities associated with each. Surveys and / or interviews with LHD-based nurses, NCDPH key informants, and PHEs' hospital supervisors confirmed these activities.
14_Markiewicz-2012	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Perceived impact of PHE program on 4 measures: Communication between hospitals and local public health with regard to H1N1 reporting and investigation	proportion across 4 categories: greatly enhanced / somewhat enhanced / did not enhance / response count	Source: Local health department nurses

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
14_Markiewicz-2012	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Perceived impact of PHE program on 4 measures: Completeness of H1N1 reporting	proportion across 4 categories: greatly enhanced / somewhat enhanced / did not enhance / response count	Source: Local health department nurses
14_Markiewicz-2012	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Perceived impact of PHE program on 4 measures: LHD's ability to be more efficient in reporting and investigating cases / clusters of H1N1	proportion across 4 categories: greatly enhanced / somewhat enhanced / did not enhance / response count	Source: Local health department nurses
14_Markiewicz-2012	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Perceived impact of PHE program on 4 measures: Timeliness of H1N1 reporting	proportion across 4 categories: greatly enhanced / somewhat enhanced / did not enhance / response count	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Respond directly to LHD's requests for information needed from a patient's medical record for 100.0 reporting or investigation purposes	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Report cases of communicable disease at their hospital to LHD for patients that reside in county or health district.	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Proactively inform LHD of unusual cases / clusters of CD at their hospital	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Facilitate LHD's access to physicians or others at their hospital who can provide information 94.1 needed from a patient's medical record for reporting or investigation purposes	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Refer patients (or family members of patients) with a CD for follow-up services, as needed.	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Pass on new or timely information from NCDPH, their hospital, and / or CDC regarding diseases of 72.9 public health importance.	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Conduct interviews with patients and / or their family members at LHD's request.	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Provide regular reports on influenza cases at their hospital during flu season.	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Meet regularly with LHD staff to review reportable cases, provide updates, and / or share 42.4 information.	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived importance of 10 services received from public health epidemiologists: Meet with LHD's Epidemiology Team to review cases, provide updates, and / or share information.	proportion across 3 categories: very important / somewhat important / not important	Source: Local health department nurses
14_Markiewicz-2012	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Perceived value of role played by public health epidemiologist in responding to the H1N1 pandemic	score 1-10	Source: Public health epidemiologists' hospital supervisors

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Are there any communication issues specific to your organization IDPH did not address during the H1N1outbreak (April2009–present)?	Categorical: No, SNS guidance, other	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		**Guidance for physicians and hospitals should be posted on the IDPH Web site**	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Guidance for physicians and hospitals should be posted on the IDPH Web site	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Hospitals, private medical providers and health clinics should have a separate IDPH hotline to call for information / clarification on laboratory testing and / or treatment guidelines	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		How often did your organization access the IDPH Web site and / or Help line during theH1N1 response	Categorical: At least once a day, never	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH H1N1 messages and instruction helped your organizationrespond to the outbreak.	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH issued clear H1N1influenza outbreak informational messages during WHO Phase 3.	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		**IDPH issued clear social distancing measures**	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH issued H1N1 messages in a timely manner during WHOPhases 3–5.	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH issued too many H1N1 alerts, updates, guidance, etc., during WHO Phases 3-6	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH medical and non-medical messages / information was accurate	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH messages (alerts, instructions, etc.)were read byyour organizations' appropriatestaff person	Scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH messages influenced your organization's decision toactivate emergency response plan(s)	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH phone bank "hotlines" should coordinate hotline activities with local health departmentsandhospitals	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH phone bank "hotlines" shouldcoordinate hotline activities with local healthdepartments and hospitals	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH phonebank "hotlines" shouldcoordinate hotline activities with local healthdepartments and hospitals	scale: 1-5	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH prioritized the most critical H1N1 information for your organization	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH should issue information messages duringinternational / national disease outbreaks likeH1N1	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH should issue informationmessagesduring international / national diseaseoutbreaks like H1N1	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH should not make any changes in the way it delivers information toyour organization inpreparation for the seasonal flu season (October 2009) and potential H1N1 vaccinationcampaigns	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH should open a joint information center(JIC) to coordinate messaging during statewidedisease outbreaks	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's fax machine was an effectivemeans of communication to use duringa disease outbreak like H1N1	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's fax system is an effective means of communication during a disease outbreak likeH1N1	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's fax system was an effectivemeans of communication to use duringa disease outbreak like H1N1	scale: 1-5	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's fax system was an effectivemeans of communication to use duringa disease outbreak like H1N1.	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's fax system was an effectivemeans of communication to use duringa disease outbreak like H1N1.	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's fax system was an effectivemeans of communication to use duringa disease outbreak like H1N	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		**IDPH's H1N1 Influenza conference calls were helpful to your organization**	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's H1N1 Influenza conferencecalls were helpful to your organization	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool during a diseaseoutbreak	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's Hospital-Health AlertNetwork (H-HAN) is a usefulcommunication tool to use during adisease outbreak.	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's Hospital-Health AlertNetwork is a useful communication toolto use during a disease outbreak.	scale: 1-5	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's messages should include Web site links to updated information rather than attachingentire documents	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's Web site provided timely and useful information	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's Web site should be updated 1x per day	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPH's written messaging format (faxes, e-mails, documents, etc.) is easy tounderstand / follow	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		IDPHmessages issued during WHO Phases 3–5 were read by the organization's appropriatestaff person(s)	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Local health departments should continue to customize IDPH H1N1 messages / updates withlocal information and statistics	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Local health departments should continueto customize IDPH H1N1 messages with localinformation	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Local health departments should open their own JIC during statewide disease outbreaks likeH1N1	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Localhealth departments should continueto customize IDPH H1N1 messages / updateswith local information and statistics	scale: 1-5	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Please indicate where your organization receivedH1N1 messaging information from during theresponse	Number: 1-6	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Please prioritize your organization's preferred method for receiving IDPH communication	Categorical: email, IDPH website, conference calls, H-HAN, cell phone, landlines, other, blackberry)	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Unless state guidance differs, IDPH should not customize CDCmessages / update	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		What topics doyou want IDPH toaddress now thatWHO has declaredPandemic Phase 6?	Categorical: H1N1 vaccine development, school closure, social distancing, other	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Your organization would prefer to receive just one update from IDPH each day unless there isemergency guidance requiring immediate distribution	Categorical: Strongly agree, agree, neutral, disagree, strongly disagree, don't know	
263_Argonne_2010	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Your organization would prefer to receivejust one update from IDPH each day unlessthere is emergency guidance requiringimmediate distribution	scale: 1-5	
278_Howard-2012	Other interesting, specify...	Information source	MD or Pharm: Receipt of information	Yes / No; Predictors by role, site, local H1N1 cases, other features. Also regression (OR)	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
279_Hunter-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		challenges and lessons learned	unclear	
279_Hunter-2012	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		from whom they first learned of the event	organization name	
279_Hunter-2012	Intermediate - coordination with response partners		level of involvement in activated response capabilities	percentage	
279_Hunter-2012	Intermediate - coordination with response partners		organizations and agencies that contributed to the response capabilites	government agencies	
279_Hunter-2012	Intermediate - coordination with response partners		response capabilities activated	specific response capabilities	
279_Hunter-2012	Health - morbidity and mortality		tsunami related deaths or injuries	count	
279_Hunter-2012	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		when they first became aware of the threat	time and date	
279_Hunter-2012	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		when they formally received notification	time and date	
279_Hunter-2012	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		whom they alerted about the event	organization type	
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Authority to include adults in Imunization Information System	proportion	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Data entry mandatory for providers	proportion	
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Imunization Information System functional component: identifying high-risk or high-priority populations / recipients	proportion	
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Imunization Information System functional component: risk mapping	proportion	
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Imunization Information System functional component: tracking adverse events	proportion	
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Proportion allowing providers to place vaccine orders	proportion	
290_Moriarty-2014	Resource use, including cost		Proportion of respondents reporting funding for public health preparedness and response from funds from the Centers for Disease Control and Prevention (CDC) Public Health Emergency Preparedness Cooperative in 2009 Agreements	proportion	
290_Moriarty-2014	Resource use, including cost		Proportion of respondents reporting receiving funding, staffing support, and other resources from the emergency preparedness program for their immunization programs after the H1N1 vaccination campaign	proportion	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
290_Moriarty-2014	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Proportion of respondents who reported gaining ability to identify high-risk or high-priority populationsfrom 2009 to 2010, number of fewer IPMs reported having the function in 2012	proportion; number	
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Proportion of respondents who reported risk-mapping capability using geographic information systems (GIS) function	proportion having function; proportion having function decrease between surveys	
290_Moriarty-2014	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Proprortion of respondents who, from 2009 to 2010, responded to all three surveys and reported that their jurisdictions' immunization program had gained the ability to identify high-risk or high-priority populations between the two surveys	proportion	
290_Moriarty-2014	Intermediate - coordination with response partners		Pushing vaccine-related communication to providers	proportion	
290_Moriarty-2014	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Specific nuimber who reported that their jurisdictions' immunization program had gained the ability to identify high-risk or high-priority populations in place in 2009 reported no longer having it in 2010	number	
290_Moriarty-2014	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Specific number of immunization program managers (IPMs) who reported having the ability to push vaccine-related communication to providers in 2010 no longer reported having this function in 2012	number	
290_Moriarty-2014	Intermediate - coordination with response partners		Specific number of immunization programs that did not have the functionality to allow providers to place vaccine orders as part of their jurisdictions' IIS in 2010 could do so in 2012	number	
290_Moriarty-2014	Intermediate - coordination with response partners		Specific number of immunization programs that previously allowed providers to place vaccine orders in 2010 indicated they no longer could in 2012	number	
290_Moriarty-2014	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Specific number of respondents who reported gaining / losing the ability to identify high-risk or high-priority populationn from 2009 to 2010	number to gain and lose function	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
290_Moriarty-2014	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Specific number of respondents who reported losing the ability to identify high-risk or high-priority population from 2010 to 2012	number	
290_Moriarty-2014	Intermediate - coordination with response partners		Transferring vaccines among provider sites, states, or jurisdictions	proportion	
300-Ockers-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Entity relied upon for accurate, timely informationregarding outbreaksor public healththreats?	Categorical: state HD, federal agencies, professional societies, news media	
300-Ockers-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		How was informationreceived from public health officialsdisseminatedto clinic staff?	Categorical: face to face, routine staff meeting, hard copy facsimile, email, posting in common area	
300-Ockers-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Please choose the three (3) MOST EFFECTIVE ways for public health departments tocommunicate information to you for each category	Categorical: emails, blast faxes, phone calls, press releases, notifications through health alert network, posting info to general health dept websites, newsletters, sponsored conference calls, in person visits to provider offices, notifications by postal mail, text message alerts, twitter feeds	
300-Ockers-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Please indicate the MOST EFFECTIVE ways for public health departments to communicate information to yourpractice about the following public health emergencie	Categorical: emails, blast faxes, phone calls, press releases, notifications through health alert network, posting info to general health dept websites, newsletters, sponsored conference calls, in person visits to provider offices, notifications by postal mail, text message alerts, twitter feeds	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
300-Ockers-2011	Intermediate - bidirectional exchange of information, reporting and feedback from technical audiences		Regarding preparedness for the (upcoming) 2009 H1N1 influenza vaccinationcampaign, how would you characterize the usefulness of information or guidance youhave received from the STATE health department	Categorical: very useful, other	
300-Ockers-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Who receives and disseminates updates from public health officials regarding vaccineadministration?	Categorical: nurse, nurse manager, office manager, VFC point of contact, medical assistant, physician	
305_Seidl-2010	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	Occupationally relevant information	Are you getting enough information to do your job?	Yes, definitely; Yes, I think I have enough; Unsure; No, I need a little more; No, I'm completely in the dark	
305_Seidl-2010	Values and preferences (e.g. perceptions of the intervention / preferences for implementation approach)	Satisfaction with topic specific information	The information you're receiving regarding the following areas on swine flu is:	Tick all that apply: General disease information; Infection control; Personal protective equipment and measures; Health service plans; Your role in the response	
305_Seidl-2010	Acceptability (acceptance of or compliance with the intervention)	usefulness of various sources of information	Usefulness of various sources of information on H1N1 influenza 2009 - separately for 9 sources (newspaper; television; WHO; CDC; Queensland Health Information Bulletins; Townsville Health Service District; Queensland Health Internet Site; QHEPS Swine Flu Intranet Site; THSD Intranet Swine Flu Site)	very useful / somewhat useful / neutral / not useful / completely useless / not applicable	
321_Dearinger-2011	Resource use, including cost		LHD: capacity within their jurisdiction to disseminate guidance and information to health care providers	Very good / excellent vs. other response	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		LHD: Case reporting guidelines, disseminated to MDs	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		LHD: Containment guidelines, disseminated to MDs	Yes / No	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
321_Dearinger-2011	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		LHD: health care professional notification was a risk mitigation strategy initiated in their local jurisdiction	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		LHD: Identification of suspected cases, disseminated to MDs	Yes / No	
321_Dearinger-2011	Other interesting, specify...	Communication methods	LHD: methods used to communicate with pharmacists	Fax, email, phone	
321_Dearinger-2011	Other interesting, specify...	Communication methods	LHD: methods used to communicate with physicians	Fax, email, phone	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		LHD: Number of information updates disseminated to pharmacists	#	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		LHD: Treatment protocol, disseminated to MDs	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		LHD: Type of information disseminated to pharmacists	Treatment protocols, Acquisition or distribution of supplies	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		MD: Case reporting guidelines, received from LHD	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		MD: Containment guidelines, received from LHD	Yes / No	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		MD: Identification of suspected cases, received from LHD	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		MD: received information from the state health department	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		MD: received some type of information about the H1N1 outbreak from an LHD	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		MD: Treatment protocol, received from LHD	Yes / No	
321_Dearinger-2011	Other interesting, specify...	Information source	MD: Where did you seek information about H1N1?	CDC, LHD, SHD, Academic medical center other	
321_Dearinger-2011	Other interesting, specify...	Information source	MD: Who did you contact for assistance / resources for patient care?	CDC, LHD, SHD, Academic medical center other	
321_Dearinger-2011	Other interesting, specify...	Information source	MD: Who would you contact for assistance / resources in patient care?	CDC, LHD, SHD, Academic medical center other	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		MDs who received information regarding case identification: used the information in clinical decision-making	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Pharm: Aware of their LHD's emergency plan in the event of an influenza outbreak	Yes / No	
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Pharm: Received guidance and information about H1N1 from the LHD	Yes / No	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
321_Dearinger-2011	Intermediate - effectiveness (reach, accuracy) of alerts / messaging / guidance dissemination		Pharm: Received guidance and information about H1N1 from the SHD	Yes / No	
321_Dearinger-2011	Other interesting, specify...	Information source	Pharm: Who would contact if a shortage of antiviral medications during an influenza outbreak	Other pharmacies or manufacturers, LHD, SHD	
321_Dearinger-2011	Values and preferences (e.g., perceptions of the intervention, preferences for implementation approach)		Pharm: Would have liked more information on H1N1 during the outbreak	Yes / No	
327_Quinn-2018	Feasibility (barriers to implementation of the practice and ability to overcome them)	Provider alternative information sources	Provider alternative information sources	yes / no across 8 options (CDC; NYSDH; Publicly available websites, general media; Medical journals, online or point-of-care resources; colleagues, practice administration, family, or friend; professional societies or healthcare associations; did not use any of these sources; some other source)	
327_Quinn-2018	Other (specify ...)	Provider preference	Provider preference for public health communications and guidance	selection from among 6 methods of communication: (email; hard copy or through regular mail; in-person (face-to-face) presentations; online webinar sessions; via hospital / clinic administrators or leadership; conference calls)	
327_Quinn-2018	Feasibility (barriers to implementation of the practice and ability to overcome them)	Provider use of information sources	Provider use of information sources	yes / no across 6 options (NYC Health Alert Network, eCity Health Information, NYC DOHMH Website, Zika Testing Call Center, Provider Conference Calls, Did not use any of these sources)	
330_Revere-2014	Other (specify ...)	Provider preference	Provider preference for most important component to include in a public health message	selection from among 11 components: topic, background, other conditions, location, link, population, contact, report, recommend, signs / symptoms, source	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
330_Revere-2014	Feasibility (barriers to implementation of the practice and ability to overcome them)	Provider smart phone ownership	Provider smart phone ownership	yes / no	
330_Revere-2014	Feasibility (barriers to implementation of the practice and ability to overcome them)	Provider use of technology	Provider use of different technologies for receiving information	yes / no across 8 categories (email, cell phone, Fax, SMS, SmartPhone, social media, pager, pop-up dashboard	
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Had contacted the state or local health department in the past 2 years	Had contacted the state or local health department in the past 2 years	yes / no	
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Had contacted the state or local health department in the past 2 years	Had contacted the state or local health department in the past 2 years - for reporting a notifiable disease	yes / no	
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Had contacted the state or local health department in the past 2 years	Had contacted the state or local health department in the past 2 years - for reporting a possible infection of public health importance	yes / no	
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Had contacted the state or local health department in the past 2 years	Had contacted the state or local health department in the past 2 years - for arranging for diagnostic testing	yes / no	
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Had contacted the state or local health department in the past 2 years	Had contacted the state or local health department in the past 2 years - for concerns about sexually transmitted infections or human immunodeficiency virus contact tracing	yes / no	
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Had contacted the state or local health department in the past 2 years	Had contacted the state or local health department in the past 2 years - for a possible outbreak	yes / no	
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Had contacted the state or local health department in the past 2 years	Had contacted the state or local health department in the past 2 years - for other reasons	yes / no	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
331_Santibanez-2016	Feasibility (barriers to implementation of the practice and ability to overcome them)	Knew how to reach health department directly for an urgent issue	Knew how to reach health department directly for an urgent issue	yes / no	
331_Santibanez-2016	Other (specify ...)	Provider preference	Preferred sources for obtaining public health information - ProMED mail	yes / no	
331_Santibanez-2016	Other (specify ...)	Provider preference	Preferred sources for obtaining public health information - Publicly available websites (e.g., WebMD, newspapers, blogs)	yes / no	
331_Santibanez-2016	Other (specify ...)	Provider preference	Preferred sources for obtaining public health information - Social media (e.g., Twitter)	yes / no	
331_Santibanez-2016	Acceptability (acceptance of or compliance with the intervention)	Usefulness of varying forms of communication from state or local health department	Usefulness of varying forms of communication from state or local health department - health alerts	yes / no	
331_Santibanez-2016	Acceptability (acceptance of or compliance with the intervention)	Usefulness of varying forms of communication from state or local health department	Usefulness of varying forms of communication from state or local health department - printed subject matter by mail	yes / no	
331_Santibanez-2016	Acceptability (acceptance of or compliance with the intervention)	Usefulness of varying forms of communication from state or local health department	Usefulness of varying forms of communication from state or local health department - Social media (Facebook, Twitter)	yes / no	
331_Santibanez-2016	Acceptability (acceptance of or compliance with the intervention)	Usefulness of varying forms of communication from state or local health department	Usefulness of varying forms of communication from state or local health department - smartphone application	yes / no	
332_Staes et al-2011	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	Knowledge concerning public health guidance	Children under 5 years of age are considered high-risk for serious illness if they acquire swine flu	false; true; don't know	
332_Staes et al-2011	Feasibility (barriers to implementation of the practice and ability to overcome them)	Provider use of information sources	Educational materials to share with patients	institutional; local / state health department; CDC; other	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
332_Staes et al-2011	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	Knowledge concerning public health guidance	Pregnant women are considered high-risk for serious illness if they acquire swine flu	false; true; don't know	
332_Staes et al-2011	Feasibility (barriers to implementation of the practice and ability to overcome them)	Provider use of information sources	Primary source of information about treatment	institutional; local / state health department; CDC; other	
332_Staes et al-2011	Feasibility (barriers to implementation of the practice and ability to overcome them)	Provider use of information sources	Primary source of information about who & how to test	institutional; local / state health department; CDC; other	
332_Staes et al-2011	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	Knowledge concerning public health guidance	Rapid point-of-care tests for influenza A can distinguish between seasonal influenza A and the swine flu influenza	false; true; don't know	
332_Staes et al-2011	Acceptability (acceptance of or compliance with the intervention)	Rating of amount of email communication received	Rating of amount of email communication received	too much; too little; just right	
332_Staes et al-2011	Other (specify ...)	Receipt of information from Department of Health	Receipt of information from Department of Health via email	yes / no	
332_Staes et al-2011	Other (specify ...)	Receipt of information from Department of Health	Receipt of information from Department of Health via fax	yes / no	
332_Staes et al-2011	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	Knowledge concerning public health guidance	The current recommendations for patients with probable or confirmed swine flu is to exclude them from school or work for 7 days after their first day of symptoms or for 24 hours after their symptoms resolve whichever is longer	false; true; don't know	

Information Sharing

Outcomes (survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy / paste)	Response scale for question(s)	Comment
332_Staes et al-2011	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	Knowledge concerning public health guidance	The only reliable test to confirm or rule out swine flu is the PCR test at the Utah Public Health Laboratory or the CDC	false; true; don't know	
332_Staes et al-2011	Intermediate - knowledge of emergency preparedness / response & at-risk populations needs during emergencies	Knowledge concerning public health guidance	The recent outbreak strain of swine flu is susceptible to oseltamivir (Tamiflu™)	false; true; don't know	
332_Staes et al-2011	Other (specify ...)	Visted websites	Visted the CDC H1N1 flu website	at least once a week; never	
332_Staes et al-2011	Other (specify ...)	Visted websites	Visted the Department of Health website	at least once a week; never	
332_Staes et al-2011	Other (specify ...)	Visted websites	Visted their institutional website	at least once a week; never	

NR = not reported; NA = not applicable

Emergency Operations Coordination

Study and survey information

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
136_Davis-2014	US	To examine local health department (LHD) preparedness capacities in the context of participation in accreditation and other performance improvement efforts	No event	Local health departments in the US	LHD directors, administrator, or preparedness coordinators from 333 LHDs across 40 states (however, unclear how LHDs or states selected)		NR	Other (propensity score matching)	NR	NR	Previous survey, cited & validated	2010-2012
162_Rademacher-2013	US	To assess 1) the farm community's own perception of their disaster management resources; (2) the actual use of their resources in previous disasters; and (3) how these resources related to the functional areas of institutionalized disaster management.	No event	All individuals with experience farming in community in Sussex County, Delaware	Anyone who worked or had worked on a farm in Sussex County (including seasonal workers, family members of farm owner). Excluded those engaged in farm support services (feed or equipment providers)	Individuals attending 'Ag Week' Jan / 2012 + random sample survey in 5 major townships of Delaware	NR	Random sample	NR	NR	Developed based on existing framework in the literature (eg, CDC Capabilities)	01 / 2012-NR
218_Jensen and Youngs-2015	US	To determine counties implementation of the National Incident Management Systems in counties in the United States (intent and behavior)	No event	county emergency managers in the US	county emergency managers	National Association of Counties	3,066	Random sample	Email	Email	Developed based on existing framework in the literature (eg, CDC Capabilities)	NR

Emergency Operations Coordination

Study and survey information

PDF name	Country / ies	Survey objective	Event	Target population	Survey eligibility criteria	Sample frame	Total N of sample frame	Sampling method from sample frame	Format of survey recruitment	Format of survey delivery	Survey development	Time period for survey
221_Jensen-2011	US	To assess the extent to which counties across the US intend to implement (or have implemented) the National Incident Management System (and factors responsible for variation between intent and behavior)	No event	all levels of government, and all private and non-profit organizations involved in emergency management	country-level emergency managers across the US	country-level emergency managers across the US belonging to the National Association of Counties	3066	Random sample	Email	Website / online	Developed based on existing framework in the literature (eg, CDC Capabilities)	01 / 2010-03 / 2010
226_Decker-2011	US	To measure the acceptance and utilization of the incidence command system by first responder organizations and selected allied disciplines in the state of Ohio.	No event	first responder organizations and selected allied disciplines (in Ohio)	explicit criteria not specified. Organizations selected from included: fire departments, law enforcement, emergency medical services, emergency management, bomb squads, hazardous materials teams, public health and public works	membership rosters from included organizations (Ohio Fire Chiefs' Association, Buckeye State Sheriffs' Association, Ohio Chiefs of Police Association, Emergency Management Association of Ohio, Ohio Bomb Squad Technical Advisory Committee, Ohio Hazmat Technical Advisory Committee, Ohio Department of Health, and the County Engineers Association of Ohio)	NR	Random sample	NR	NR	De novo survey, no information on validation, testing, or question improvement	NR
279_Hunter et al-2012	US	To evaluate the local public health emergency response to the tsunami threat in California	Real event (2011 Tsunami off Japan)	Public health, emergency management agency, and emergency medical services agencies in coastal floodplain areas	representatives from local public health, emergency management agency, and emergency medical services	local health departments, emergency management agency or office of emergency management, and emergency medical services	57 agencies	Other (representatives based on functional role in agency)	Email	Website / online	Developed based on existing framework in the literature (eg, CDC Capabilities)	08 / 2011-11 / 2011

NR = not reported; NA = not applicable

Emergency Operations Coordination

Risk of bias / Quality

Risk of bias / Quality

PDF name	Adequacy of survey tool development	Study population (eligibility criteria) prespecified and uniformly applied?	Adequacy and appropriateness of polling / sampling methodology	Respondents non-representative of the target population	Percent who responded	Information on margin of error reported
136_Davis-2014	Low RoB	Unclear RoB[1]	Low RoB	Unclear RoB[2]	80% (2010); 71% (2011); 73% (2012)	Unclear RoB[1]
162_Rademacher-2013	Unclear RoB[1]	Low RoB	Low RoB	Unclear RoB[2]	NR	Unclear RoB[1]
218_Jensen and Youngs-2015	Unclear RoB[1]	Low RoB	Low RoB	Unclear RoB[2]	37%	Low RoB (5%)
221_Jensen-2011	Low RoB	Low RoB	Low RoB	Unclear RoB[2]	37	Low RoB (5%)
226_Decker-2011	Unclear RoB[1]	Unclear RoB[1]	Low RoB	Unclear RoB[2]	56%	Unclear RoB[1]
279_Hunter et al-2012	Low RoB	Low RoB	Low RoB	Low RoB	56%	Unclear RoB[1]

Footnotes

1. No information
2. No comparison with non-respondents or target population

Emergency Operations Coordination

Outcomes (list of survey questions)

Outcomes

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy/paste)	Response scale for question(s)
136_Davis-2014	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		Preparedness domain: communication and information dissemination	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)
136_Davis-2014	Intermediate - response is led by appropriate expertise		Preparedness domain: corrective action activities	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)
136_Davis-2014	Intermediate - ICS staff decision-making and situational awareness		Preparedness domain: emergency events and exercises	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)
136_Davis-2014	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		Preparedness domain: incident command	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)
136_Davis-2014	Other interesting, specify...	Legal preparedness	Preparedness domain: legal preparedness	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)
136_Davis-2014	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		Preparedness domain: plans and protocols	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)
136_Davis-2014	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		Preparedness domain: surveillance and investigation	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)
136_Davis-2014	Intermediate - response is led by appropriate expertise		Preparedness domain: workforce and volunteers	Mean domain preparedness score and 95% confidence interval for 3 comparison groups (North Carolina LHDs; national LHDs with some program improvement initiative; national LHDs with no program improvement initiatives) at 3 survey periods (2010, 2011, 2012)

Emergency Operations Coordination

Outcomes (list of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy/paste)	Response scale for question(s)
159_Pogreba-Brown-2013-Public health in the field.pdf	Health - morbidity and mortality		Presence of health syndromes	Proportion of respondents with syndromes categorized into 4 larger categories: Gastrointestinal; Skin; Respiratory;
159_Pogreba-Brown-2013-Public health in the field.pdf	Other interesting, specify...	Participant characteristics	Sex, age, ill before event	Proportions, means, etc.
159_Pogreba-Brown-2013-Public health in the field.pdf	Other interesting, specify...	Event characteristics	Total attending; hours of event	Whole numbers
162_Rademacher-2013	Resource use, including cost		Actually used community resource for ASSESSMENT during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for ASSESSMENT during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for ASSESSMENT during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for ASSESSMENT during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COMMUNICATION during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COMMUNICATION during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COMMUNICATION during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COMMUNICATION during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COORDINATION during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COORDINATION during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COORDINATION during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for COORDINATION during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for IMPLEMENTATION during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements

Emergency Operations Coordination

Outcomes (list of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy/paste)	Response scale for question(s)
162_Rademacher-2013	Resource use, including cost		Actually used community resource for IMPLEMENTATION during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for IMPLEMENTATION during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Actually used community resource for IMPLEMENTATION during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Intermediate - ICS staff decision-making and situational awareness		ASSESSMENT: Consulted with external farm experts on experiences in other regions of the United States in order to improve their own practices?	Proportion agreed
162_Rademacher-2013	Intermediate - ICS staff decision-making and situational awareness		ASSESSMENT: Had sufficient resources to carry out their own damage assessment after a disaster?	Proportion agreed
162_Rademacher-2013	Intermediate - ICS staff decision-making and situational awareness		ASSESSMENT: Had used previous experience to assess risks to their farm before the arrival of last year's winter weather?	Proportion agreed
162_Rademacher-2013	Intermediate - ICS staff decision-making and situational awareness		ASSESSMENT: Have a preparedness plan for residents on the farm, livestock, and/or crop?	Proportion agreed
162_Rademacher-2013	Intermediate - ICS staff decision-making and situational awareness		ASSESSMENT: In the immediate response phase, had been engaged by emergency services in some form in needs assessments?	Proportion agreed
162_Rademacher-2013	Intermediate - ICS staff decision-making and situational awareness		ASSESSMENT: Whether the farm's damage assessment after the 2006 floods fed into a larger recovery plan for the community	Proportion agreed; did not know; disagreed
162_Rademacher-2013	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		COMMUNICATIONS: There was some communications network among farmers to communicate on an imminent disaster.	Proportion agreed
162_Rademacher-2013	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		COMMUNICATIONS: There was some communications network among farmers to communicate on the response to a disaster	Proportion agreed
162_Rademacher-2013	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		COMMUNICATIONS: There was some communications network in the community that they made use of to exchange information on mitigation measures	Proportion agreed
162_Rademacher-2013	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		COMMUNICATIONS: There was some communications system to exchange information with the rest of the farm community	Proportion agreed
162_Rademacher-2013	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		COMMUNICATIONS: They had a contact list of all farmers in their community	Proportion agreed
162_Rademacher-2013	Intermediate - bidirectional information exchange,		COORDINATION: Farm representative to lead on mitigation?	Proportion agreed

Emergency Operations Coordination

Outcomes (list of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy/paste)	Response scale for question(s)
	coordination, and decision-making with response partners			
162_Rademacher-2013	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		COORDINATION: Forum to decide on mitigation measures collectively?	Proportion agreed
162_Rademacher-2013	Intermediate - bidirectional information exchange, coordination, and decision-making with response partners		COORDINATION: Have knowledge of who in the community had road-clearing equipment that was ready to be deployed	Proportion agreed
162_Rademacher-2013	Resource use, including cost		IMPLEMENTATION: Believed they had sufficient resources themselves to protect farm assets and farm residents ahead of a disaster	Proportion agreed
162_Rademacher-2013	Resource use, including cost		IMPLEMENTATION: Confident that they had adequate resources to organize their own emergency response.	Proportion agreed
162_Rademacher-2013	Intermediate - ICS staff decision-making and situational awareness		IMPLEMENTATION: Reported to have taken measures to protect the farm before the start of the previous winter	Proportion agreed
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for ASSESSMENT during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for ASSESSMENT during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for ASSESSMENT during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for ASSESSMENT during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COMMUNICATION during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COMMUNICATION during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COMMUNICATION during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COMMUNICATION during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COORDINATION during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COORDINATION during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements

Emergency Operations Coordination

Outcomes (list of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy/paste)	Response scale for question(s)
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COORDINATION during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for COORDINATION during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for IMPLEMENTATION during MITIGATION phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for IMPLEMENTATION during PREPAREDNESS phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for IMPLEMENTATION during RESPONSE phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
162_Rademacher-2013	Resource use, including cost		Perceived presence of a community resource for IMPLEMENTATION during RECOVERY phase of disaster cycle	mean of 5-point Likert (strongly agree to strongly disagree) in response to 'general' and 'exhibit' statements
218_Jensen and Youngs-2015	Feasibility (barriers to implementation of the practice and ability to overcome them)		Association between county capacity characteristics and a) intent and b) behaviour of implementing the National Incident Management System	Pearson correlations for 6 variables: Emergency management programme: staff size; Emergency management programme: size of full-time staff; Volunteers for majority of fire services?; Volunteers for emergency medical services?; Emergency management's budget size; HS/FEMA preparedness funding
218_Jensen and Youngs-2015	Feasibility (barriers to implementation of the practice and ability to overcome them)		Association between disaster characteristics and a) intent and b) behaviour of implementing the National Incident Management System	Pearson correlations for 2 variables: Number of recent presidentially declared disasters in county; County disaster expectations
218_Jensen and Youngs-2015	Feasibility (barriers to implementation of the practice and ability to overcome them)		Association between emergency manager's characteristics and a) intent and b) behaviour of implementing the National Incident Management System	Pearson correlations for 8 variables: Age; Gender; Education; Years as a county emergency manager; Presidentially declared disasters; Has other county positions; Number of other county positions; Employed outside county
218_Jensen and Youngs-2015	Feasibility (barriers to implementation of the practice and ability to overcome them)		Association between implementers views and a) intent and b) behaviour of implementing the National Incident Management System:	Pearson correlation for Implement views index
218_Jensen and Youngs-2015	Feasibility (barriers to implementation of the practice and ability to overcome them)		Association between perceived leadership and inter-organizational Characteristics and a) intent and b) behaviour of implementing the National Incident Management System	Pearson correlations for 3 variables: State leadership index; Elected leadership index; Inter-organizational relations index
218_Jensen and Youngs-2015	Feasibility (barriers to implementation of the practice and ability to overcome them)		Association between perceptions of county capacity characteristics and a) intent and b) behaviour of implementing the National Incident Management System	Pearson correlations for 4 variables: County has enough personnel for needs; County has enough personnel for NIMS; County has enough funds for needs; County has enough funds for NIMS
218_Jensen and Youngs-2015	Feasibility (barriers to implementation of the practice and ability to overcome them)		Association between policy characteristics and a) intent and b) behaviour of implementing the National Incident Management System	Pearson correlation

Emergency Operations Coordination

Outcomes (list of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy/paste)	Response scale for question(s)
221_Jensen-2011	Acceptability (acceptance of or compliance with the intervention)		NIMS implementation actual implementation (index)	Mean of index score summarizing all behavior variables
221_Jensen-2011	Acceptability (acceptance of or compliance with the intervention)		NIMS implementation actual implementation variables	Mean of 6 point Likert scale of managers reported behavior of implementing NIMS across 7 subquestions (same as intention subquestions)
221_Jensen-2011	Acceptability (acceptance of or compliance with the intervention)		NIMS implementation intent (index)	Mean of index score summarizing all intent variables
221_Jensen-2011	Acceptability (acceptance of or compliance with the intervention)		NIMS implementation intent variables	Mean of 6 point Likert scale of managers perceived intent to implement NIMS across 7 subquestions
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Believe that basic Incident Command Systems training (e.g., through the courses such as ICS-100), is beneficial to all personnel within their organizations	Proportion believe beneficial (summarized from survey data: 5 point Likert (strongly agree to strongly disagree))
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Believe that basic Incident Command Systems training (e.g., through the courses such as ICS-100), is beneficial to volunteers (of those organizations using volunteers)	Proportion believe beneficial (summarized from survey data: 5 point Likert (strongly agree to strongly disagree))
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Perceived benefit and applicability to discipline	Proportion undecided or disagreed (summarized from survey data: 5 point Likert (strongly agree to strongly disagree))
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Perceived effectiveness of Incident Command Systems by particular disciplines	Proportion to rate 'principles as applicable in their discipline'
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Perceived benefit of more advanced Incident Command Systems training for personnel (e.g., through the courses such as ICS-300 or ICS-400)	Proportion undecided or disagreed (summarized from survey data: 5 point Likert (strongly agree to strongly disagree))
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Perceived benefit of more advanced Incident Command Systems training for senior level management and command staff only (e.g., through the courses such as ICS-300 or ICS-400)	Proportion 'undecided or disagreed'; and 'agreed or strongly agreed' (summarized from survey data: 5 point Likert (strongly agree to strongly disagree))
226_Decker-2011	Other	Respondent characteristics	Respondent characteristics	Proportion representing different disciplines recruited (e.g., bomb, fire, EMS, etc.); response rate stratified by discipline categories
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Utilization of Incident Command System during major events and disasters	Proportion endorsing use
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Utilization of Incident Command System during organization's day-to-day operations	Proportion endorsing use
226_Decker-2011	Acceptability (acceptance of or compliance with the intervention)		Utilization of Incident Command System during routine emergency calls	Proportion endorsing use
279_Hunter et al-2012	Feasibility (barriers to implementation of the practice and ability to overcome them)		challenges and lessons learned	unclear
279_Hunter et al-2012	Intermediate - effectiveness (reach, accuracy) of alerts/messaging/guidance dissemination		from whom they first learned of the event	organization name

Emergency Operations Coordination

Outcomes (list of survey questions)

Study pdf	Outcome domain	Comment (if "Other (specify)', otherwise blank	Specific question(s) (copy/paste)	Response scale for question(s)
279_Hunter et al-2012	Intermediate - coordination with response partners		level of involvement in activated response capabilities	percentage
279_Hunter et al-2012	Intermediate - coordination with response partners		organizations and agencies that contributed to the response capabilities	government agencies
279_Hunter et al-2012	Intermediate - coordination with response partners		response capabilities activated	specific response capabilities
279_Hunter et al-2012	Health - morbidity and mortality		tsunami related deaths or injuries	count
279_Hunter et al-2012	Intermediate - effectiveness (reach, accuracy) of alerts/messaging/guidance dissemination		when they first became aware of the threat	time and date
279_Hunter et al-2012	Intermediate - effectiveness (reach, accuracy) of alerts/messaging/guidance dissemination		when they formally received notification	time and date
279_Hunter et al-2012	Intermediate - effectiveness (reach, accuracy) of alerts/messaging/guidance dissemination		whom they alerted about the event	organization type

NR = not reported; NA = not applicable