Overview of Health Literature Search and Database

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The Consortium for Resilient Gulf Communities (CRGC) is working to assess and address the impact of the 2010 Deepwater Horizon oil spill and the health, social, and economic wellbeing of Gulf Coast communities. To better understand the health effects of the spill on communities, the CRGC designed and administered a community-based telephone survey of residents. In designing that survey, it was vital that the team consult the available literature to understand what was known about the health effects of oil spills. Researchers therefore conducted a literature review on the health impacts of oil spills to identify both what was already known about the effects of oil spills and gaps in our knowledge. This document describes the literature search we undertook, and the corresponding database presents the results from that search. A document summarizing findings is presented elsewhere (Parks and Ramchand, forthcoming).

Although the Oil Spill Health Literature Database was designed primarily to inform the CRGC survey instrument, it has many other uses. It can aid researchers, health care professionals, policymakers, community leaders, and residents in their efforts to

- **summarize what is known about public health after oil spills.** By presenting consolidated information in an easy-to-use format, the database allows audiences to extract and summarize relevant information to help orient their work within extant literature.
- **identify knowledge gaps relating to public health after oil spills.** By describing what previous research has accomplished in the area of public health and oil spills, the database also helps researchers recognize what gaps still exist in the literature and where additional research efforts are needed.
**Literature Review Strategy**

CRGC researchers searched peer-reviewed medical literature in June 2016 to identify what had been published about public health after oil spills. We searched PubMed with no exclusion dates, using the term *oil spill*, which yielded 1,977 results. Then, we reviewed titles and abstracts to exclude irrelevant articles. We excluded papers primarily concerning animals (\(N = 394\)), ecosystems (\(N = 1,237\)), and other irrelevant topics (\(N = 75\)). Commentary (\(N = 75\)), reviews (\(N = 13\)), and economics papers (\(N = 12\)) were also excluded. Thus, 171 results remained after applying the exclusion criteria. We could not locate 34 articles, so our full text review includes 137 papers that address public health impacts after oil spills.

**FIGURE 1: Literature Review Selection Process**

- **Searched oil spill in PubMed**
  \(N = 1,977\)

- **271 content-relevant documents remained**

- **Searched for full text of remaining 171 documents**

- **Reviewed full text of 137 documents**

- **110 content-relevant documents remained**

- **Documents for literature review**
  \(N = 75\)

- **Excluded documents concerning animals**
  \(N = 394\), ecosystems \(N = 1,237\), and other irrelevant topics \(N = 75\)

- **Excluded 75 commentaries, 13 reviews, and 12 economic papers**

- **Could not locate 34 documents**

- **Excluded documents concerning animals**
  \(N = 2\), ecosystems \(N = 12\), and other irrelevant topics \(N = 13\)

- **Excluded 18 commentaries, 14 reviews, and 3 economic papers**
Database Construction

Prior to reading the papers, we identified several categorical domains, which included the referent oil spill, year of data, sample size, population, indicators of exposure, outcome measures, analytic strategy, and results. We created an Excel spreadsheet, filling information from each article into columns for the key domains. We enabled a drop-down menu so that users can narrow their searches.

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Using the Database

The database is provided as a downloadable Microsoft Excel spreadsheet. It is formatted to answer specific questions in a variety of ways. For example, a user can use the search function to locate
all papers authored or coauthored by a particular author or using a particular analytical method.

Additionally, the drop-down filter menus at the top of each column can be used separately or in combination to find subsets of papers. For example, a user could search under Referent Oil Spill for “Exxon Valdez” and under Population–Short Form for “Fishers” to find the papers concerning fishers affected by the Exxon Valdez oil spill.

**Limitations of the Database**

PubMed provides researchers free access to MEDLINE, which covers biomedical journals. It is the nation’s primary medical literature database; however, other literature on public health and oil spills may be omitted (e.g., research from the sociology or economics literature). In addition, the database was not updated after June 2016, so any articles published after that date are not contained in the database. Users should keep these limitations in mind when referencing the database.