

GuLF STUDY

2017 NEWSLETTER



Completing Milestones and Continuing Research



A Message from **Dr. Dale Sandler** Principal Investigator

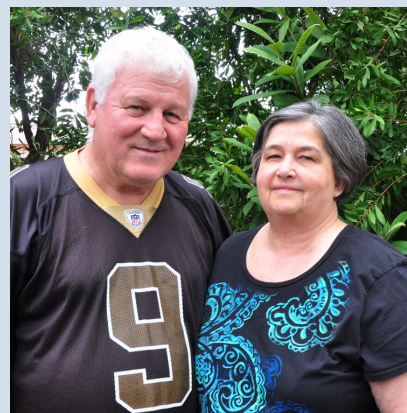
We know that communities affected by the Deepwater Horizon oil spill are concerned about their long-term health. The GuLF STUDY is continuing to study the physical and mental health effects of the oil spill. In this newsletter, you will learn about our progress and plans for future follow up activities. We also introduce you to some of the people who have been helping with the study. Finally, we report on some of the results linking exposures to possible health outcomes. As always, I encourage all participants to stay involved with the study so that we can answer questions about health that are so important to clean-up workers and their communities.

Meet the Community Advisory Group

The GuLF STUDY **Community Advisory Group** (CAG) includes local community leaders from the Gulf states. The CAG members help us ensure that the interests of the community are represented when we plan and carry out study activities. The study team works with the CAG to identify ways to encourage participation in the study. The CAG also helps us share our results with the community and align scientific goals with community goals. At the most recent CAG meeting, we focused on ways to report study results to the community and planned for the next phase of the study.

Sharon Gauthé has used her education in social services to work with the community since the 1970's. She is currently the executive director of BISCO (Bayou Interfaith Shared Community Organization). In July 2010, Sharon presented at the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling meeting in New Orleans. She shared the experiences of local fishermen and businesses with the Community Impacts panel.

David Gauthé has a wealth of knowledge in policy, public relations, economic development, and disaster relief and recovery. He works as an organizer with BISCO. In July 2010, David spoke in Washington D.C. to share the stories of Gulf residents and put forth solutions to the problems facing the Gulf. David currently co-chairs the CAG with Sharon. He and Sharon also represent the CAG in meetings of the GuLF STUDY Scientific Advisory Board.



*David and Sharon Gauthé, Co-Chairs
of the Community Advisory Group*

Other Members:

Shawn Collins

*Florida Division of
Emergency Management*

Kayla Guerrero

*Louisiana Department of
Health and Hospitals*

Shaula Lovera

*Catholic Charities
Archdiocese of New Orleans*

Janel Lowman

University of South Alabama

Ya-Sin Shabazz

NAACP

Joe Taylor

Franklin's Promise Coalition

Mary I. Williams

Dillard University

Study Progress and Future Activities

This year we completed three major study activities!

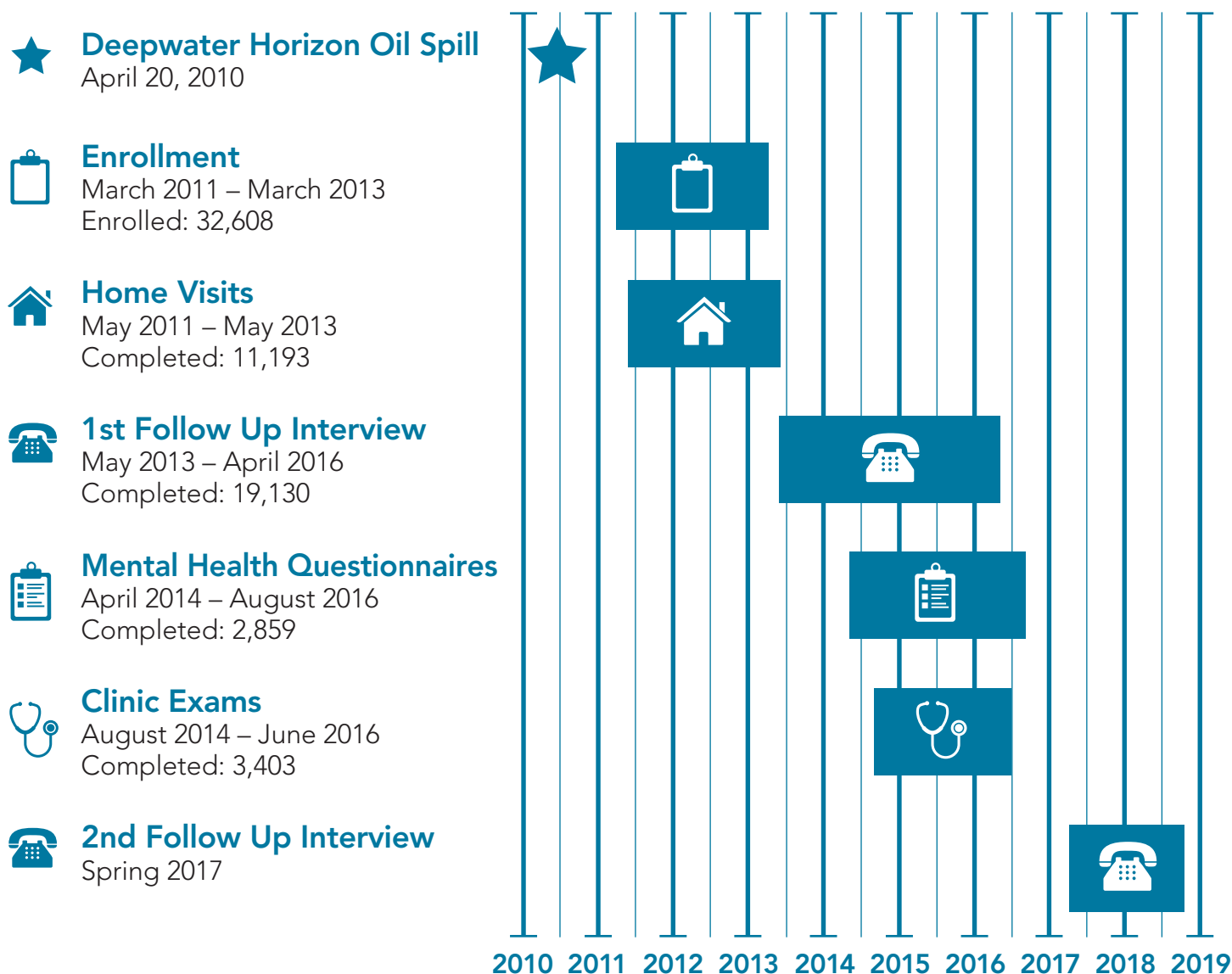
In April 2016 we completed the first follow up interview with 19,130 participants. These telephone interviews started in 2013. We asked participants to report changes in their physical and mental health.

In June we completed in-person clinic exams with participants who lived within 60 miles of a study clinic in Mobile, AL or New Orleans, LA. Between the first exam in 2014 and the final exam in 2016, a total of 3,403 participants took the time to complete the exam. This exam included testing lung and nerve function, evaluating blood pressure and mental health, and collecting blood and saliva samples.

In August 2016 we completed a series of mental health questionnaires with 2,859 participants. This information will allow us to evaluate long-term mental health effects.

Thank you to all the participants who completed these activities. Research like ours takes time. We are continuing to review the information you have given us. We look forward to reporting detailed results to you as they become available.

Looking ahead, we are planning the second follow up interview beginning in the Spring of 2017. The interview will include new questions about health concerns and medication use. These interviews are the only way we can learn about long term impacts of the oil spill on health. It is important that we hear from as many of you as possible. Please watch your phone for our call in the coming months!



GuLF STUDY Research

The GuLF STUDY team completed three important papers that lay the groundwork for research on health effects related to the oil spill. A paper published in the journal *Environmental Health Perspectives* describes the study design and characteristics of participants. The second paper, to be published in the *Journal of Toxicology and Environmental Health*, describes the collection of blood and other samples in the study. The third paper, to be published in the *Journal of Exposure Science & Environmental Epidemiology*, explains how we have measured and classified levels of exposure to oil, burning oil, and dispersants. These measurements and others we are developing will be used with health information to better understand health effects of working on the oil spill.

In addition to the main study team, the GuLF STUDY involves many collaborators with diverse research interests. Below, we introduce you to some of the GuLF STUDY scientists and findings from their research.

Mental Health



Dr. Sarah Lowe

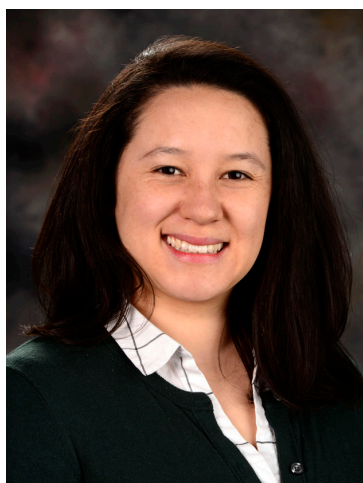
Dr. Sarah Lowe is an assistant professor of psychology at Montclair State University. Dr. Lowe's research focuses on how natural and manmade disasters affect mental health. Dr. Lowe's prior research explored the mental health effects of Hurricanes Katrina and Sandy, and the terrorist attacks of September 11, 2001.

Dr. Lowe is working with the GuLF STUDY to study long-term mental health effects and related issues. While studying mental health service use, her research found that most participants did not seek mental health services after the oil spill. Of the 11% that did seek mental health services, 53% sought both medication and counseling. She also showed that physical pain and job loss contributed to the reporting of depression and other mental health complaints. However, these factors did not fully explain why people had mental health problems after the oil spill. Ongoing research is seeking to understand the impact of oil-spill chemicals and stress on mental health.

Lowe, Sarah R. et al. "Mental Health Service Use by Cleanup Workers in the Aftermath of the Deepwater Horizon Oil Spill." *Social Science & Medicine* (1982) 130 (2015): 125–134. PMC. Web. 10 Oct. 2016.

Lowe, Sarah R. et al. "Why Does Disaster Recovery Work Influence Mental Health? : Pathways through Physical Health and Household Income." *American Journal of Community Psychology* (1973) 59 (2016):PubMed. Web. 10 Oct. 2016.

Lung Function



Kaitlyn Gam

Kaitlyn Gam is a PhD student at Tulane University. As a graduate student, she completed the 2014 National Institutes of Health Summer Internship Program. She is now completing her dissertation under Dr. Sandler's guidance.

Kaitlyn is interested in the impact of the oil spill and other factors on lung function. So far, she has not found overall differences in lung function between workers and non-workers studied 1-3 years after the spill. However, workers who performed activities that exposed them to the burning oil did have worse lung function than workers who were not exposed to burning oil. Kaitlyn will also be looking at neighborhood factors that contribute to differences in measures of lung function.

She presented her research at conferences in 2015 and 2016. She also submitted a paper on types of oil spill work and lung function for journal publication. Kaitlyn continues to study the lung function of participants in the study.

Gam K, et al. *Impact of oil spill clean-up on pulmonary function 1-3 years after the Deepwater Horizon disaster.* Submitted for publication.

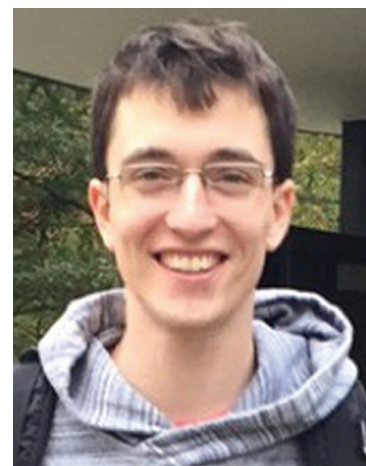
Chemicals in Oil

Oil-spill chemicals such as BTEX (benzene, toluene, ethylbenzene, o-xylene, and m/p-xylene) are found in many petroleum and consumer products that people encounter every day. These chemicals quickly evaporate and cannot be measured in blood more than a few hours after exposure. Some study participants were worried about stories linking health concerns to higher levels of chemicals in the blood of people who had worked on the oil spill. To address this concern, the study team collected an extra blood sample from about 1,000 study participants.

We confirmed that there was no relationship between participating in oil spill clean-up and levels of BTEX in blood 1-3 years after the spill. This means the BTEX levels we found reflect **current** exposures such as smoking or other everyday products. We are currently using this information to determine what else contributes to elevated levels of BTEX in some people's blood.

We are also studying whether there are any health changes related to having higher levels of these chemicals. For example, **Brett Doherty**, a graduate student at the University of North Carolina, is using this information to learn if there are changes in blood cell counts or other blood characteristics related to blood levels of BTEX. His results did not find clear changes related to these chemicals. Brett presented his research at the National Institutes of Health Summer Internship Program Poster Day. He is developing an article for publication in a scientific journal.

Doherty BT, Kwok RK, Curry MD, Ekenga C, Chambers D, Sandler DP, Engel LS. Associations between blood BTEX concentrations and hematologic parameters among adult residents of the U.S. Gulf States. (2016)



Brett Doherty

Oil Dispersants

Craig McGowan is completing a fellowship at the Centers for Disease Control and Prevention. Craig's work on the GuLF STUDY seeks to understand the effects of dispersant use on clean-up workers. He has used information on clean-up tasks reported by participants to characterize potential exposure to the dispersants that were used following the Deepwater Horizon spill. Participants who had contact with dispersants were more likely to report having symptoms such as burning or itchy eyes, cough, wheeze, or tightness in the chest at the time of the spill. Symptoms at enrollment were also associated with likely dispersant exposure. However, among those with symptoms during clean up, symptoms appeared to have largely resolved by the time of study enrollment. In February of 2016, Craig presented his research at the Gulf of Mexico Oil Spill and Ecosystem Science Conference in Tampa, FL. A paper has been submitted for publication in a scientific journal.

McGowan CJ, Kwok RK, Engel LS, Stenzel MR, Stewart PA, Sandler DP. Respiratory, dermal, and eye irritation symptoms associated with Corexit EC9527A/EC9500A following the Deepwater Horizon oil spill: Findings from the GuLF STUDY (2016)



Craig McGowan

Medical Referrals | 1-855-NIH-GULF (1-855-644-4853)

If you have concerns about your health related to the oil spill, please see your doctor. If you do not have a doctor, feel free to call our study hotline and we will refer you to a local clinic that offers care at a reduced cost.

Thank You!

Thank you to all who continue to participate in study activities! By participating in study activities like the follow up interviews and clinic exams, you are helping communities and researchers to learn more about the effects of the oil spill. We encourage you to keep your contact information up to date so we can share our results and progress with you!

Keep Your Contact Information Updated

We want to stay in touch with you to share findings and follow your health. Please take time to return the contact information update card on the next page. Please return a contact card even if your contact information has not changed.

Each returned contact card will be entered into the contact update drawing.

Contact Update Drawing!

- Just update your contact information to be entered.
- One name will be selected from every 1,000 updates received.
- Winner will receive a \$500 gift card.



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on the back of this card.



Update or Confirm Your Information

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You Can Also Update Online at

<https://gulfstudy.nih.gov/recontact>.

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CHECK YOUR CONTACT INFORMATION

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☐ My contact information is correct.

☐ My contact information has changed. Please see update below:

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Street: _____

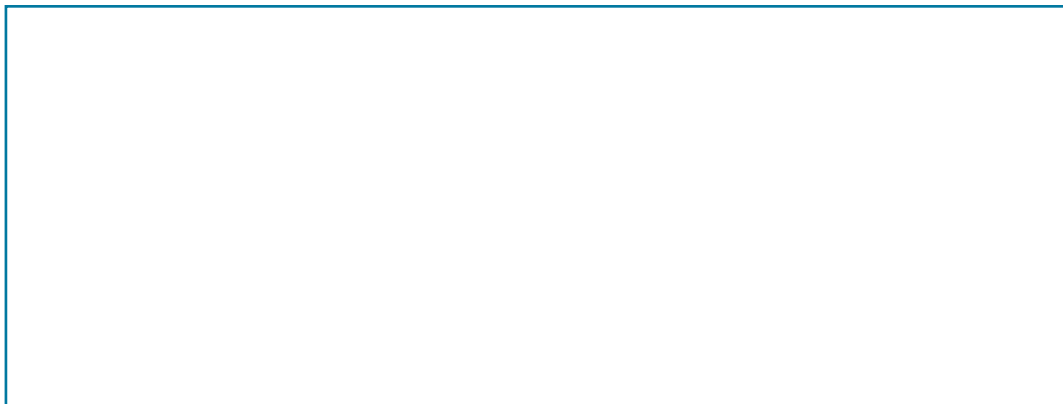
City: _____ State: _____ Zip: _____

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IS YOUR CONTACT INFORMATION CORRECT?

- ☐ Yes: Please mark this box and return in the envelope provided.
- ☐ No: Please update your information on the other side of this card.



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