PROJECT INFORMATION

Project Director's Name*	Benjamin Springgate
Organization*	LSU Health Sciences Center, New Orleans, Community and Patient Partnered Research Network
Project Title*	Community Resilience Learning Collaborative and Research Network (C-LEARN)
Reporting Period*	Final Report

Note to Grantees: In sections 1 to 5, we ask you to highlight your accomplishments (including outputs and outcomes) through this grant award. These sections of the final grant report will be made available to the public.

1. GOALS AND ACCOMPLISHMENTS

1.1 Please restate the goals and objectives of your project.*

Goal 1: To engage communities in Louisiana in a community learning initiative to best build capacity to enhance resilience in stress/disaster.

Objective 1a. To assess rapidly community capacity to address resilience.

Objective 1b. To develop tools and conduct a pilot assessment on how best to promote community capacity for improving mental health resilience, including:
1) Technical Assistance (TA) for individual programs or
2) Community Engagement and Planning (CEP) to support multi-sector coalitions.

Goal 2: To describe C-LEARN evolution, and how CEP coalitions used strategies to address depression and broader resilience; and to support stakeholders in developing policy recommendations.

Goal 3: To conduct a rapid qualitative assessment of community priorities, strengths, and needs as a result of the COVID-19 pandemic and the ongoing threat of climate change events.

1.2 Describe the accomplishments of your project. You should include both the anticipated accomplishments that you outlined in your project proposal as well as any *unanticipated* accomplishments that have since occurred. Describe any activities you have conducted, programmatic progress made, or project benchmarks and milestones met.*

The project was able to accomplish its goals and objectives as described in Section 1.1 above. These goals and objectives reflected modifications to the original scope brought on by the COVID-19 pandemic's impact on in-person study activities, as discussed with NAS GRP project officers.

Summary of accomplishments:

The project accomplished a range of beneficial outcomes. These are documented in 5 peer-reviewed academic publications with a sixth in process:

Acoie J, Augustine LA, Birch T, Gotfryd E, Rodriguez LJ, Savannah SB, Springgate B. Chapter 10 – Strengthening the Response to Disasters and Trauma. In Plough AL. Community Resilience: Equitable Practices for an Uncertain Future. Oxford University Press. April 2021.

Palinkas, L. A., Springgate, B. F., Sugarman, O. K., Hancock, J., Wennerstrom, A., Haywood, C., Meyers, D., Johnson, A., Polk, M., Pesson, C. L., Seay, J. E., Stallard, C. N., & Wells, K. B. (2021). A rapid assessment of disaster preparedness needs and resources during the COVID-19 pandemic. International Journal of Environmental Research and Public Health, 18(2), 425. https://doi.org/10.3390/ijerph18020425

Everett, A., Sugarman, O., Wennerstrom, A., Pollock, M., True, G., Haywood, C., Meyers, D., Raines, A., Wells, K., Johnson, A., Arevian, A. C., Sato, J., & Springgate, B. (2019). Community-informed strategies to address trauma and enhance resilience in climate-affected communities. Traumatology. https://doi.org/10.1037/trm0000225

Pollock, M. J., Wennerstrom, A., True, G., Everett, A., Sugarman, O., Haywood, C., . . . Springgate, B. (2019). Preparedness and Community Resilience in Disaster-Prone Areas: Cross-Sectoral Collaborations in South Louisiana, 2018. Am J Public Health, 109(S4), S309-S315. doi: 10.2105/AJPH.2019.305152

Springgate, B. F., Arevian, A. C., Wennerstrom, A., Johnson, A. J., Eisenman, D. P., Sugarman, O. K., . . . Wells, K. B. (2018). Community Resilience Learning Collaborative and Research Network (C-LEARN): Study Protocol with Participatory Planning for a Randomized, Comparative Effectiveness Trial. Int J Environ Res Public Health, 15(8). doi:10.3390/ijerph15081683

Numerous study products (www.c-learn.org/community-resources and www.c-learn.org/resources), which include

seven academic conference presentations:

Everett A, Wennerstrom A, Pollock M, Sugarman O, Sato J, Johnson A, Haywood C, Meyers D, Polk M, Arevian A, Wells K, True G, Springgate B. Community Resilience Learning Collaborative and Research Network (C-LEARN): Developing Models to Support Resilience in Communities at Risk of Climate-Change-Associated Disasters. American Public Health Association. November 2019. Philadelphia, Pennsylvania

Szklarski, E., Pollock, M., Wennerstrom, A., Springgate, B.,True, G., Everette, A., Sugarman, O., C-LEARN Leadership Council. (2019, January). Community perspectives of disaster resilience priorities affecting social determinants of behavioral health in Southeast Louisiana. Poster Presentation at LSUHSC-NO Medical Research Day 2019 at University Medical Center - New Orleans, LA.

Springgate B. Community Resilience Learning Collaborative and Research Network (C-LEARN). National Academies of Sciences, Engineering, and Medicine Gulf Research Program Panel Discussion. Robert Wood Johnson Culture of Health Conference. March 8, 2019. Woodlands, TX.

Springgate, B. Resilience and Mental Health Infrastructure and Training Post-Katrina, Keynote. Xavier University of Louisiana College of Pharmacy's 11th Health Disparities Conference. April 2018. New Orleans, LA.

Springgate, B. Community Resilience Learning Collaborative and Research Network – Gulf of Mexico Alliance, All Hands Conference. June 13, 2018. St. Petersburg, FL.

Springgate, B. Disasters, climate change, and mental health. In: APREBA Annual Conference. 2018. San Juan, Puerto Rico.

Springgate, B. Climate change and health. In: American College of Physicians National Meeting. 2018. New Orleans, LA.

and seven community conferences (www.c-learn.org.org/events)

1) Study Kickoff Conference, June 22, 2018
2) Two collaborative events with ENCORES Engagement project
a. Agency event, March 30, 2018
b. Community event, March 29, 2019
c. ENCORES final conference, August 9, 2019
3) Agency Kickoff and Part 1 Results Dissemination Conference, May 24, 2019

4) CEP Housing Resource Fair, October 19, 2019

5) CEP Multisector Resource Fair, March 7, 2020

Through these tools and products, the study disseminated lessons learned while increasing knowledge and understanding of how climate event-threatened communities may feasibly enhance individual and community resilience.

As a result of the COVID-19 pandemic, the original study objectives were modified in discussion with NAS GRP project officers. Implementation of the original recruitment protocol was underway when the concerns nationally about COVID-19 as a pandemic grew and became widely known. New Orleans was an early COVID-19 hotspot in March 2020. Many community organizations and partners shut their doors to in-person activities including client services and meetings, developments which dramatically impacted study recruitment and intervention. Despite these challenges, the community partners' resilient reframing of the project given the circumstances of the pandemic represents an important lesson learned – namely that the engaged community respects science enough given full partnership to continue a focus on science even in a pandemic that forces modification of the originally planned study.

The project's innovative intervention and research methods, as well as experience in implementation taken as far as was possible, will support opportunities for further scientific inquiry and study—which may be a lesson both for our local community as well as for others facing similar circumstances (see below).

Among specific accomplishments, community and academic study partners:

- Successfully engaged community organizations across communities around study goals; (Goal 1). More about partners here: www.c-learn.org.org/about

- Applied for and procured IRB approvals in iterative fashion as project components progressed;

- Established contracts between partner universities and community organizations and hired staff;

- Assembled a Leadership Council of community and academic stakeholders and co-developed a Memorandum of Understanding (MOU) (www.c-learn.org/resources. Click Memorandum of Understanding) to guide all operations and collaboration. Please find more about the Leadership Council at www.c-learn.org/our-leadership-council.

- With help of the Leadership Council, identified 115 agencies in Baton Rouge, Orleans Parish, and the Coastal Southern Louisiana to participate in study. 47 qualitative interviews were completed as part of Goal 1, Objective

1a. This resulted in two academic publications (Pollock et al. 2019, Everett et al. 2019). Data are publicly available at OpenICPSR, https://doi.org/10.3886/E130842V1-79141

- Developed public-facing website for participants to track project progress, disseminate tools, share news updates about project activities, and share resources or articles for agency participants (Goal 1). Please refer to www.c-learn.org.

- Developed study education materials, intervention protocols, assessment tools, and conducted pilot (Goal 1, Objective 1b). These are available at www.c-learn.org/resources.

- Developed products for dissemination including academic publications and presentations, and a booklet for public dissemination (Goal 1, 3); please see www.c-learn.org/publications.

- Hosted and co-hosted seven community conferences. Additional information about conferences is available at www.c-learn.org/events
o The first event was a community kickoff conference, held June 22, 2018, in which we distributed information about the study itself to the general community (Goal 1). Details are available at www.c-learn.org/events.
o The second, third, and fifth were collaborative events with the ENCORES Engagement project. Day 1, held March 29, 2019, focused on disseminating research results and informational resources to community leaders and agency heads (details are available at www.c-learn.org/events. See "March 29, 2019 agency event"). Day 2, held March 30, 2019, was a research dissemination and resource event for community members, featuring a crawfish boil after conference proceedings (www.c-learn.org/events. See "March 30, 2019 community crawfish boil event"). The third and final ENCORES conference was held August 9, 2019 and included dissemination for and discussions about local research for LGBTQ+ people, social determinants of health, and disaster resilience (www.c-learn.org/events. See "final ENCORES community conference").
o The fourth was an agency kickoff conference, held May 24, 2019, both to distribute results from the initial rapid assessment, and disseminate more information about agency participation to potential agency participants (Goal 1); Details are available at www.c-learn.org/events.
o The sixth was a housing resource fair planned and implemented as a Community Engagement and Planning coalition product. The housing fair was held October 19, 2019. Details at www.c-learn.org/events.
o The seventh was a multisector resource fair, also planned and implemented as a CEP coalition product. This resource fair was held March 7, 2020. Details at www.c-learn.org/events.

- Established contracts with local experts in each concentration area for technical assistance (TA) webinars (Goal 1, Objective 1b);
- Developed intervention materials and hosted webinar events/meetings for both intervention arms (Goal 1,

Objective 1b):

o TA Webinar – Housing (4 modules); webinar materials are available at www.c-learn.org/housing-recordings

o TA Webinar – Disaster preparedness (4 modules); webinar materials are available at www.c-learn.org/disaster-recordings

o TA Webinar – Financial Literacy (4 modules); webinar materials are available at www.c-learn.org/financial-recordings

o TA Webinar – Mental health (4 modules); webinar materials are available at www.c-learn.org/mental-health-recordings

o Community Engagement and Planning (CEP) – 6-session curriculum covering the agency resources, the social ecological model of health, SWOT analyses, collaborative action planning, and dissemination planning. Materials are available at: www.c-learn.org/cep

- Implemented and completed both intervention arms, including two community action conferences designed and hosted by members of the CEP intervention group. One focused on housing resources, held October 19, 2019, and the other addressed general resilience building for the upcoming hurricane season, held March 7, 2020 (Goal 1, Objective 1b). Details can be found at www.c-learn.org/events.

- Developed three community resource guides, one for Orleans Parish (www.c-learn.org/orleans-parish), one for Coastal Louisiana (www.c-learn.org/coastal-la), and another for COVID-19 needs (www.c-learn.org/covid-19-resources) related to project themes with project partners (Goal 1, Objective 1b);

- Developed and programmed materials into mobile technology CHORUS platform for recruitment and delivery of interventions (Goal 1, Objective 1b)

o Agency screener survey

o Agency administrator baseline survey

o Agency administrator 6-month follow-up survey

o Provider baseline survey

o Provider 6-month follow-up survey

o Client screener survey

o Client baseline questionnaire

o Client 6-month follow-up questionnaire

o eCBT – 30 days of text messages for cognitive behavioral psychoeducation intervention; please see www.c-learn.org/text-message-interventions

o Text-based resources – housing; 10 days of text messages for intervention; please refer to www.c-learn.org/text-message-interventions

o Text-based resources – financial literacy; 10 days of text messages for intervention; please see www.c-

learn.org/text-message-interventions

o Text-based resources – disaster preparedness; 10 days of text messages for intervention

o Interactive voice response programming; please refer to www.c-learn.org/text-message-interventions

- Established external contract with RTI for participant baseline and follow-up surveys (Goal 1, Objective 1b; Goal 2);

- Identified agencies for in-person, individual client recruitment (Goal 1, Objective 1b; Goal 2);

- Conducted: agency screeners, agency administrator baseline surveys, provider baseline surveys, provider 6-month follow-up, agency administrator 6-month follow-ups, client screeners, client baselines, client monthly surveys up to month 5 (Goal 1, Objective 1b; Goal 2);

- Recruited study participants in-person at participating community organizations. Individually enrolled and completed baseline surveys for 183 participants at participating community agencies. These activities were terminated when in-person activities were closed by state, municipal authorities, and agencies due to safety concerns as the COVID-19 pandemic emerged in March 2020. Anticipated client participant 6-month follow-ups were terminated. Provider and agency administrator 6-month follow ups were also terminated (Goal 1, Objective 1b; Goal 2).

- Intentions to explore interactions of program and individual-level interventions, and interventions with baseline stress exposure on resilience outcomes were not able to be completed owing to interruption of recruitment and data collection associated with the COVID-19 pandemic.

- Completed qualitative evaluations with agency participants randomized to the CEP intervention (Goal 2):
o Evaluations focused on CEP coalition outcomes, strengths of the intervention, and suggested areas for improvement for future interventions.
o Assessed using tools included in the intervention and relying on networks and relationships established as part of the CEP intervention.
o Collected data and identified opportunities for policy recommendations, as well, in COVID-19 related interviews (Goal 3).

- Conducted a rapid qualitative assessment of community priorities, strengths, and needs related the evolving interactions of climate-related disaster preparedness in the community setting and the COVID-19 pandemic (Goal 2; Goal 3).

- Collaboratively developed an interview guide for rapid assessment participants (Goal 2; Goal 3);

- Identified 80 potential interviewees for rapid assessments (Goal 2; Goal 3);

- Completed 26 interviews in two months (June & July 2020) (Goal 3);

- Completed analysis of interview transcripts using rigorous qualitative methods in a novel application of the RAPICE methodology (Goal 3);

- Report based on the interviews was drafted with input from the C-LEARN Leadership Council (Goal 2; Goal 3);

- Published manuscript based on rapid qualitative assessment of community priorities, strengths, and needs related the evolving interactions of climate-related disaster preparedness in the community setting and the COVID-19 pandemic, and preparing a second manuscript at time of submission of this report (Goal 2; Goal 3);

- Preparing a community dissemination booklet to share progress and results with C-LEARN participants and document community policy recommendations (Goal 2; Goal 3).

Accomplishments were further documented in these products and processes:

- The study protocol was refined community partners and published with community and academic authors in the International Journal of Environmental Research and Public Health (Springgate et al., 2018) (Goals 1 and 2);

- Study collaborators completed data collection as well as several analyses of initial key informant interview data. Data was used to inform further intervention development. Two publications were generated from initial interview data - one published in the American Journal of Public Health and another in Traumatology (Pollock et al, 2019 & Everett et al, 2019, respectively). Data was also presented at the annual American Public Health Association conference in 2019 Goals 1 and 2).

- Leadership Council meetings were held approximately twice a month to maximize community engagement in study design and implementation. Through the Leadership Council, all aspects of the study are co-led with substantial community participation. The Leadership Council grew to include expert consultants in disaster preparedness and recovery, housing, financial planning, and mental health (Goal 2; Goal 3) (www.c-learn.org/our-leadership-council).

Leadership Council members included representation from the Barrataria-Terrebone National Estuary Program

(BTNEP), the Lower Ninth Ward Center for Sustainable Engagement and Development (CSED), the Louisiana Community Health Worker Outreach Network (LACHON), St. Anna's Episcopal Church, National Alliance on Mental Illness (NAMI), and the NOLA Partnership for Mental Health, among other academic members, community experts, and consultants. The Leadership Council identified scores of community organizations for study engagement and involvement. Organizations from sectors as diverse as private industry, health care, social services, faith-based, state and local government, and environmental protection have been engaged individually, in regional meetings (e.g. BTNEP Leadership Council), and in C-LEARN community conferences regarding study background, processes, findings, and opportunities for ongoing participation in the study (Goals 1; Goal 2; Goal 3).

46 community agencies were represented in Goal 1 interviews, 23 agencies enrolled to participate in Goal 2 activities, and 26 agencies were represented in Goal 3 activities. Some agencies participated in multiple goal activities.

The C-LEARN website (www.c-learn.org) is updated on a regular basis as a repository of study information and resources, streaming webinars, and community-developed materials.

2. Outputs

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

When the form is completed, you may click "Mark as Complete" at the bottom of the page to save your work and return to the dashboard.

* denotes required fields

2. OUTPUTS

Outputs are tangible or measurable deliverables, products, data, or publications produced during the project period.

2.1. Please indicate the number of students (K-12, undergraduate, or graduate), postdoctoral scholars, citizen scientists, or other trainees involved in the project. *

Please enter 0 if none were involved.

K-12 students	0
Undergraduate students	1
Graduate students	9
Postdoctoral scholars	0
Citizen Scientists	8
Other Trainees	0

2.2. Has your project generated any data and/or information products? *

Generation of data includes transformations of existing data sets and generation of data from existing resources (e.g., maps and images). Information products include publications, models, software, code, curricula, and digital resources.

(Check all that apply.)

Responses Selected:

Data
Information Products

2.3. Briefly describe how you fulfilled the approved Data Management Plan and, if applicable, any changes from the approved plan. *

> The Data Management Plan was fulfilled as described in the original data management plan, and data was safeguarded as approved by LSU Health-New Orleans Institutional Review Board.
>
> Qualitative data from Goals 1 and 3 were made publicly available in the OpenICPSR repository. The project citation is: Springgate, Benjamin. Community Resilience Learning Collaborative and Research Network (C-LEARN). Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2021-01-28. https://doi.org/10.3886/E130842V1.
>
> Quantitative data from Goal 2 was partially collected, but not analyzed given the premature termination of Goal 2 study activities after the onset of the COVID-19 pandemic. Data collected for Goal 2 included personal identifying information, personal health information, and identifiable data (i.e. voice recordings) that were not suitable for curation in a publicly available repository.

If your project has generated data, please download the Excel worksheet entitled GRP Data Management Reporting. Use the "Data Report" tab in the worksheet to create an inventory of data sets that you produced and to verify deposit in a curation facility. Upon completion, please upload the worksheet to your task list. If you need guidance on how to complete the Data Report, please e-mail gulfgrants@nas.edu. A member of GRP's data management staff will reach out to you.

If your project has produced publications, websites or data portals, GIS applications, models or simulations, software packages or digital tools, code, curricula, or other interactive media, please download the Excel worksheet entitled GRP Information Management Reporting. Use the "Information Products Report" tab in the worksheet to create an inventory of these products and to verify deposit in a curation facility. Upon completion, please upload the worksheet to your task list. If you need guidance on how to complete the Information Products Report, please e-mail gulfgrants@nas.edu. A member of GRP's data management staff will reach out to you.

2.4. Aside from data and information products, what other tangible or measurable deliverables or products (e.g., workshops, trainings, and outreach events) were produced during the project period? *

Upon completion of this form, you may upload supplemental material that represent the tangible or measurable deliverables or products to complement this narrative report.

The project produced multiple trainings related to themes associated with Technical Assistance (TA) and Community Engagement and Planning (CEP) intervention arms. Examples include:

- TA Webinar – Housing (4 modules), available at www.c-learn.org/housing-recordings
- TA Webinar – Disaster preparedness (4 modules), available at www.c-learn.org/disaster-recordings
- TA Webinar – Financial Literacy (4 modules), available at www.c-learn.org/financial-recordings
- TA Webinar – Mental health (4 modules), available at www.c-learn.org/mental-health-recordings
- Community Engagement and Planning (CEP) – 6-session curriculum covering the agency resources, the social ecological model of health, SWOT analyses, collaborative action planning, and dissemination planning. Materials are available at: www.c-learn.org/cep

Outreach events included:
- Study Kickoff Conference, June 22, 2018. C-LEARN event details available at www.c-learn.org/events
- Two collaborative events with ENCORES Engagement project
o Agency event, March 30, 2018;
o Community event, March 29, 2019;
o Final ENCORES community conference, August 9, 2019
- Agency Kickoff and Part 1 Results Dissemination Conference, May 24, 2019
- CEP Housing Resource Fair, October 19, 2019
- CEP Multisector Resource Fair, March 7, 2020

3. Data Management

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

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* denotes required fields

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3. DATA MANAGEMENT

In this section, please provide a response to each question to complement the **Data Report** in the GRP Data Reporting Excel worksheet.

3.1 If you listed multiple data sets in the data reporting table, please briefly describe how these data sets relate to one another. *

CLEARN Goal 1interview data were used to assess community needs and inform intervention development. This information was used to develop the materials for client recruitment and project implementation used in Goal 2.

Goal 2 data generated include the agency screener, administrator baseline, administrator 6-month follow-up, provider baseline, provider 6-month follow-up, client enrollment log, client screener, client baseline, and client monthly data. Data collection was interrupted by the COVID-19 pandemic.

Goal 3 data, C-LEARN Goal 3/Phase 3 COVID Rapid Needs Assessment Interviews, include another set of key informant interviews that assess community and organizational needs as a result of the COVID-19 pandemic. These data were collected from some of the same participants in Goal 1.

All datasets are independent of one another, but are joined in the study's primary aim to build and support disaster-prone communities in Louisiana, and illuminate important vantage points in understanding community resilience.

3.2. Please provide a list of additional documentation to describe the data listed in the reporting table (e.g., code books, lab manuals, workflow procedures). Enter none if you did not produce any additional documentation to describe the data. *

- Goal 1 Interview guide

- Goal 1 Key Informant Interviews – Qualitative codebook to analyze common themes in participant responses

- Goal 2 Screeners and surveys

o Agency screener instrument

o Administrator baseline survey instrument

o Administrator follow-up survey instrument

o Provider baseline survey instrument

o Provider follow-up survey instrument

o Client screener instrument

o Client baseline survey instrument and codebook

o Client monthly surveys instrument

o Client 6-month surveys instrument (not used because Phase 2 closed)

- Goal 2 Recruitment – On-site recruitment manual

- Goal 2 Surveys – Data management and cleaning manual (the latter part not used because of pandemic changes)

- Goal 3 Interview guide

- Goal 3 Interviews – Qualitative codebook, separate from Phase 1 codebook, to analyze common themes in participant responses

- Goal 3 Interview procedure manual

3.3. Beyond depositing data and metadata in a repository, what other activities have you undertaken or will undertake to ensure that others (e.g., researchers, decision makers, and the public) can easily discover project data? What other activities have you undertaken to ensure that others can access and re-use these data in the future? *

All qualitative data, a total of 73 transcripts and their corresponding codebooks, have been deposited in the OpenICPSR data repository for public use. Limited data cannot be publicly distributed due to sensitive or potentially identifying information, in compliance with our data management plan as well as IRB requirements.

We have made many efforts to make project activities, results, and findings as transparent and publicly available as possible. We have published 4 peer-reviewed academic papers, with more anticipated in the future. We have participated in seven local and national conferences, contributed to public meetings such as the Barataria Terrebone National Estuary Project (BTNEP) leadership conference, and hosted six of our own project community conferences involving scores of agencies. We have also engaged researchers across the country (including NAS GRP awardees).

Further, we have communicated study methods and findings with policy makers and thought leaders including regional public health leaders, the Secretary of the Louisiana Department of Health, leaders of Louisiana Medicaid, and the former Assistant Secretary for Preparedness and Response at the U.S. Department of Health and Human Services.

3.4. Are any data products you produced sensitive, confidential, and/or proprietary? *

Yes

3.4a (yes). Were these sensitive, confidential, and/or proprietary data products described in the data management plan of the approved project plan? *

Yes

3.4b (yes). If your plans for managing restricted access to and re-use of confidential data have changed since the approval of the project plan, briefly describe the new plans and procedures. *

These have not changed.

4. Information Products

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

When the form is completed, you may click "Mark as Complete" at the bottom of the page to save your work and return to the dashboard.

* denotes required fields

4. INFORMATION PRODUCTS

In this section, please provide a response to each question to complement the **Information Products Report** in the **GRP Information Products Management** Excel worksheet.

4.1. Please select the type(s) of information products that your project produced. *

Responses Selected:

1. Scholarly publications, reports or monographs, workshop summaries, or conference proceedings

2. Websites or data portals

3. Curricula for education and training

6. Software packages or digital tools, or other interactive media

Scholarly publications, reports or monographs, workshop summaries, or conference proceedings *

Please provide a list of citations for project publication, reports and monographs, workshop summaries, and conference proceedings.

Book Chapter:

Acoie J, Augustine LA, Birch T, Gotfryd E, Rodriguez LJ, Savannah SB, Springgate B. Chapter 10 – Strengthening the Response to Disasters and Trauma. In Plough AL. Community Resilience: Equitable Practices for an Uncertain Future. Oxford University Press. April 2021.

Papers:

Springgate, B. F., Arevian, A. C., Wennerstrom, A., Johnson, A. J., Eisenman, D. P., Sugarman, O. K., . . . Wells, K. B. (2018). Community Resilience Learning Collaborative and Research Network (C-LEARN): Study Protocol with Participatory Planning for a Randomized, Comparative Effectiveness Trial. Int J Environ Res Public Health, 15(8). doi:10.3390/ijerph15081683

Pollock, M. J., Wennerstrom, A., True, G., Everett, A., Sugarman, O., Haywood, C., . . . Springgate, B. (2019). Preparedness and Community Resilience in Disaster-Prone Areas: Cross-Sectoral Collaborations in South Louisiana, 2018. Am J Public Health, 109(S4), S309-S315. doi: 10.2105/AJPH.2019.305152

Everett, A., Sugarman, O., Wennerstrom, A., Pollock, M., True, G., Haywood, C., Meyers, D., Raines, A., Wells, K., Johnson, A., Arevian, A. C., Sato, J., & Springgate, B. (2019). Community-informed strategies to address trauma and enhance resilience in climate-affected communities. Traumatology. https://doi.org/10.1037/trm0000225

Palinkas, L. A., Springgate, B. F., Sugarman, O. K., Hancock, J., Wennerstrom, A., Haywood, C., Meyers, D., Johnson, A., Polk, M., Pesson, C. L., Seay, J. E., Stallard, C. N., & Wells, K. B. (2021). A rapid assessment of disaster preparedness needs and resources during the COVID-19 pandemic. International Journal of Environmental Research and Public Health, 18(2), 425. https://doi.org/10.3390/ijerph18020425

Conference proceedings:

Everett A, Wennerstrom A, Pollock M, Sugarman O, Sato J, Johnson A, Haywood C, Meyers D, Polk M, Arevian A, Wells K, True G, Springgate B. Community Resilience Learning Collaborative and Research Network (C-LEARN): Developing Models to Support Resilience in Communities at Risk of Climate-Change-Associated Disasters.

American Public Health Association. November 2019. Philadelphia, Pennsylvania

Szklarski, E., Pollock, M., Wennerstrom, A., Springgate, B., True, G., Everett, A., Sugarman, O., Haywood, C., Johnson, A., Meyers, D., Berry, J., Riefberg, L., Onyewuenyi, N., Sato, J. Community perspectives of disaster resilience priorities affecting social determinants of behavioral health in Southeast Louisiana. LSUHSC-NO Medical Research Day (poster). January 2019. New Orleans, LA.

Springgate B. Community Resilience Learning Collaborative and Research Network (C-LEARN). National Academies of Sciences, Engineering, and Medicine Gulf Research Program Panel Discussion. Robert Wood Johnson Culture of Health Conference. March 8, 2019. Woodlands, TX.

Springgate, B. Resilience and Mental Health Infrastructure and Training Post-Katrina, Keynote. Xavier University of Louisiana College of Pharmacy's 11th Health Disparities Conference. April 2018. New Orleans, LA.

Springgate, B. Community Resilience Learning Collaborative and Research Network – Gulf of Mexico Alliance, All Hands Conference. June 13, 2018. St. Petersburg, FL.

Springgate, B. Disasters, climate change, and mental health. In: APREBA Annual Conference. 2018. San Juan, Puerto Rico.

Springgate, B. Climate change and health. In: American College of Physicians National Meeting. 2018. New Orleans, LA.

Reports:

Goal 1 Results Booklet, available at https://www.c-learn.org/publications, "Community Resilience Learning Collaborative and Research Network, Phase One: Community Reflections, Fall 2018"

Goal 3 Results Report, available at https://www.c-learn.org/publications, "A Rapid Assessment of Community and Organizational Needs and Resources during the COVID-19 Pandemic"

Project Summary and Results Booklet, available at https://www.www.c-learn.org/publications, "Community Resilience Learning Collaborative and Research Network, Study Review: Results, Resilience, and Reflections, Fall 2018 - Spring 2021"

Websites or data portals *

Please provide a list of project websites and data portals (including the website URL).

OpenICPSR Project qualitative data repository: https://doi.org/10.3886/E130842V1

Website: www.c-learn.org

Facebook page: https://www.facebook.com/C-Learn-Community-Resilience-Learning-Collaborativeand-Research-Network

How long beyond the grant period will you maintain the project website/data portal and its contents? Please describe plans to archive the website/data portal and its contents after regular maintenance concludes. *

We will maintain the online resources as long as there are personnel and financial resources to maintain them and assuming there continues to be evidence that they remain in use by the broader community. At such time as we are unable to maintain online resources, we will seek to archive them.

Curricula for education and training, GIS applications, Models or simulations, Software packages or digital tools, or other interactive media, and Other *

If you produced any additional documentation to describe information products, please provide a list of this documentation (e.g., model or simulation documentation, software manuals, source code annotation).

Curricula for education and training: The community academic study team developed curricula related to housing, financial assistance, mental health, and disaster response as part of the Technical Assistance portion of intervention materials. Materials are available here under the "Technical Assistance" heading: https://www.c-learn.org/resources.

A substantial curriculum was also developed for the Community Engagement and Planning portion of intervention materials. Materials are available at www.c-learn.org/cep.

Interactive media: text message intervention for client participants. Documents with text content are available here: www.c-learn.org/text-message-interventions.

4.2. Beyond depositing information products in a repository, what other activities have you undertaken or will undertake to ensure that others (e.g., researchers, decision makers, and the public) can easily discover and access the listed information products? *

In addition to hosting multiple in-person community conferences and dissemination events, we published a public website (www.c-learn.org) and Facebook page to provide public updates on project activities and to disseminate informational products publicly.

Key findings from our Goal 1 interviews were compiled into a community reflections booklet, and were shared with the community at large. Hard copies were distributed to community partner agencies for further distribution, to study participants themselves, and were distributed at all study-related events. An electronic copy of the booklet is also available on the project's website.

The project's academic and community collaborators have published manuscripts, hosted community conferences, held online trainings, and presented at academic conferences. These materials are available online through our websites and other online repositories.

We have invited researchers from other institutions (including NAS GRP awardees) to present at a community conference. We have hosted regional, state, and national policymakers at our conferences, and shared study products with them.

Additional findings will continue to be published in publicly available academic journals, made available on our project website, and distributed to community partner agencies for further distribution.

4.3. Are any of the information products you produced confidential, proprietary, or subject to special license agreements? *

No

5. Project Outcomes

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

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* denotes required fields

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5. PROJECT OUTCOMES

Outcomes refer to the **impact(s), consequence(s), result(s), or effect(s)** that occur from carrying out the activities or outputs of the project. Outcomes may be environmental, behavioral, health-related, or programmatic. Example outcomes include, but are not limited to: increased learning, knowledge, skills, and motivation; policy changes; actions taken by a group as a result of information generated by your project.

5.1. Please describe the outcomes achieved during your project and how they were assessed. For this question, we are interested in learning about the immediate short-term outcomes that have already occurred during or as a result of your project. Do not include long-term outcomes you foresee your work contributing to beyond the end of the project. *

The project permitted a wide array of more immediate and short-term outcomes. Many of these are described in the prior sections of the report.

For example, the project facilitated the formation of a multi-sector Leadership Council of community and academic partners to work collaboratively on developing understanding of opportunities to enhance individual and community resilience in the context both of climate change, and later, also a pandemic. These community and academic collaborators developed enduring materials designed to enhance and study individual and community resilience that already have been applied in community settings and will be able to be applied in future efforts.

Community and academic partners collaboratively developed a wide range of intervention and assessment tools. These tools will be available for current use as well as further use and study at www.c-learn.org/resources. Community and academic partners developed interventions to enable research on opportunities to enhance community and individual resilience. Interventions were implemented at scale as intended, particularly the agency-level interventions. The co-development processes were conducted in a community-partnered participatory framework and as a result very likely directly built the capacity of the local agencies and their partners to respond to climate change risk, weather-related disasters, associated mental health issues, and underlying social determinants of health for the local populations. Given the project design, capacity was built with expert assistance in both intervention arms and all agencies involved in the project (Springgate et al, 2018). Further, in the community engagement arm, relationships were built across agencies to collaborative in providing services, which also very likely helped built capacity for collaboration (https://www.www.c-learn.org/phase-two). Our initiative demonstrated that it is feasible to implement programs that integrate concerns with disasters, mental health and social determinants of health, and that it can be accepted by and done collaboratively with communities that are facing disaster-related and preparedness issues. That was all accomplished prior to the COVID pandemic.

In addition, the communities participated actively in giving input into the design of the rigorous evaluation plan (2-level randomized trial), which also built capacity potentially for rigorous studies in communities affected by disasters. All of the materials, including beyond intervention materials, surveys, recruitment materials and training of staff and technology readiness, were achieved in partnership with community leaders (www.c-learn.org/our-leadership-council). This demonstrates the ability of the communities to generate the infrastructure, and commitment to

rigorous research on Gulf States' priorities and issues. These represent important current and near term outcomes of the work.

5.2. We're interested in hearing not just the results of your project but what are their implications for or contributions to:

- **offshore energy system safety,**
- **environmental protection and stewardship, and/or**
- **health and community resilience**

Please describe what you consider to be the most remarkable accomplishment or finding of your project. What can others learn from your accomplishment and finding? How do you see it fitting in with your greater field of study or community of practice? *

As climate change impacts such as hurricanes, sea level rise, and floods continue to intensify and accelerate for coastal communities in Louisiana and elsewhere, residents facing pre-existent financial challenges, housing insecurity, mental health problems, and/or those with few resources to prepare for disasters will be disproportionately affected. Frequently these people are over-represented in communities of color. Multi-sector coalitions can serve as critical resources to enhance knowledge and uptake of practices to enhance community and individual resilience to these climate-related threats, as well as to build a scientific evidence base to support preparedness. Models of community-partnered participatory research represent an opportunity to increase trust in science and to foster increased likelihood of near-term, practical application of scientific solutions for climate change and related, concomitant threats such as pandemics.

6. Communication

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* denotes required fields

Note to Grantees: In Section 6, we seek input from you to help us evaluate the Gulf Research Program's funding strategy. <u>This section will not be made available to the public.</u>

6. Information to Inform GRP Evaluations

6.1. Sharing the difficulties you encountered helps us learn from your experience. Describe any challenges you encountered in your project and how you addressed or overcame them. Challenges are inherent to conducting any complex project. These may include (but are not limited to): unexpected staffing changes, changes in the community you are working in, appearance of a new technology or dataset in the field you are working in, challenges accessing a field site, policy or regulatory changes that affect the issue you are addressing, low recruitment rates, delays in setting up services, or other problems in implementing and conducting your project. *

We encountered periodic difficulties in the project related to staff changes. These changes may occur to any projects with longer timeframes. We experienced turnover in project coordinators, who were responsible for all project logistics and implementation. We also hired graduate students to work as recruitment staff to offer both work experience and paid educational opportunities to local students. We had turnover as students graduated. We had occasional difficulty finding replacement student workers to available to work as recruiters. With effort were able to utilize other staff in the department with previous research experience to assist with recruitment and other study activities.

Among partner agencies, we noted that capacities and priorities for some agencies changed significantly over the duration of the project. In some cases, this evolution related to matters such as funding or changes in leadership at the organizations. In some instances this reduced the number of the recruitment sites available for enrolling individual participants in the study. As staffing in community organizations changed, commitment to ongoing project participation sometimes evolved, and success of efforts at ongoing engagement sometimes depended on whether there were competing, emerging priorities of partner organizations.

Originally we had identified an LSU survey group to complete client baseline phone surveys. Unfortunately, staffing and funding shifts led to unavailability of the survey group at the time we intended to implement our surveys. As a result, we had to identify and develop a new contract with a separate agency, Research Triangle International, which required additional time and was more resource-intensive than originally anticipated.

Our greatest challenge was the onset of the COVID-19 pandemic. The early and persistent local burden of COVID-19 was a major challenge that ultimately shut down individual recruitment for the originally planned randomized controlled trial and related aspects of the study. In an effort to accommodate this interruption and to try to salvage learning opportunities associated with the new reality, academic and community partners from the Leadership Council developed a new aim for the study (Goal 3) in order to assess community organizations' resourcefulness in coping with the pandemic.

6.2. We like to hear about what you learned from your work and how you feel it affects future work or the work of others. Think back on your project strategies, methods, and activities, what worked and what did not? Is there anything you would do differently in the future? If so, tell us what and why. *

The community-partnered participatory approach represented a strength for the work. The partnered design of study methods and materials contributed trust and the opportunity for enduring value of the products of the research.

Aspects of the project intervention requiring community-partnered co-leadership were time-intensive, and so establishing a longer timeline for the randomized controlled trial to better accommodate partner workflows may have added value.

The original study design involved recruitment of individual participants at community-based organizations after the conclusion of the two community-level intervention arms. In the context of the pandemic, this was not feasible. With the pandemic-related closures of community sites among organizations that had been randomized to the interventions, recruitment was no longer possible. The opportunity to measure the effect of the interventions was lost. We recognize that closures of clinical trials registered on clinicaltrials.org more than doubled in the first half of 2020 because of the pandemic, and so our study team was not alone in facing this challenge. Nonetheless, as the interventions had already been conducted, it represented an insurmountable challenge for that aspect of the study.

The decision of the Leadership Council to seek to address the challenge of the pandemic by modifying the study and adding Goal 3 represented a positive outcome. The community-partnered participatory approach of the study facilitated this collective commitment to finding an ongoing learning opportunity despite the challenges fostered by the pandemic.

6.3. What are the next steps for this work, either for you and your project team or other researchers? Has this project led to other opportunities to work in this area? *

We will continue analyses and publication of current data. We hope to be able to continue to work with partners on related opportunities.

6.4. Have you developed new collaborations or partnerships (formal or informal) as a result of this work? If yes, please describe the new collaborations or partnerships. *

The C-LEARN Leadership Council's academic and community partners developed new relationships, some of which have been documented on the project website and in publications to date. We hope to continue to document these in additional peer-reviewed analyses and publications.

6.5. What, if any, positive changes in policy or practice do you foresee as a result of your work? *

We anticipate that policymakers will see added value in the potential of multi-sector partnerships to address short, medium, and long-term threats of climate change and disasters among at-risk communities.

6.6. If you could make one recommendation to the Gulf Research Program for how best to build on the work you conducted in this project, what would it be? *

The Gulf Research Program should engage industry, additional philanthropic financiers, and governments to invest at scale now in community-partnered participatory research interventions that will address the climate change-related threats affecting communities along the Gulf Coast. The scale of the threat to coastal communities is orders of magnitude larger than currently available funding will be able to solve, and the timeframe for solutions continues to diminish more quickly each day, owing to stalled movement on slowing climate change.

7. Communication and Dissemination

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Note to Grantees: In Section 7, we ask you to help us communicate the importance, progress, and accomplishments of your work. Information provided in this section will be used by the Gulf Research Program to highlight its funded projects in print and electronic informational and promotional materials. The intended audience for the information provided in this section is different and should be thought of as a general audience. When you return to the dashboard, you may upload images that represent and illustrate the work of your project.

7.1. Please describe the most exciting or surprising thing you have learned while working on this project in a way that is understandable by a general audience. *

Coalitions of community organizations of all kinds can come together with researchers as true partners to work to bolster resilience to the threats to our lives and livelihoods that are associated with climate change, such as the accelerating frequency and intensity of hurricanes, and coastal land loss associated with sea level rise.

7.2. Do you have any stories that capture the impact of this project? (optional)

If so, please share one or two. Examples of what we are interested in include stories of people/communities that the project has helped; lives that have changed; work that led to policy change, such as legislation or regulation; and research breakthroughs.

(No response)

7.3. Have any communications, outreach, or dissemination activities occurred in relation to your project?*

Please describe:

- Any press releases issued (other than that issued by the National Academies of Sciences, Engineering, and Medicine) about the project.
- Any media coverage or news stories about the project.
- Any social media accounts, websites, listservs, or other communication vehicles used to communicate information about this project. Please include relevant web addresses if available.

Press releases:

-Notice of award – "National Academies of Sciences and the Robert Wood Johnson Foundation Fund $10M for Critical Gulf Research". LSU Media Center. Published July 18, 2017. Available at https://www.lsu.edu/mediacenter/news/2017/07/18css_carney_nas_rwjf.php

-Notice of first publication – "Study Shows Pre-Disaster Collaboration Key to Community Resilience". LSU Health New Orleans Newsroom. Available at https://www.lsuhsc.edu/newsroom/Study%20Shows%20Pre-Disaster%20Collaboration%20Key%20to%20Community%20Resilience.html

-March 2019 ENCORES Community Conference notification - "LSU Health New Orleans and Partners Host Event to Improve Mental Health after Disasters," LSU Health New Orleans Newsroom. Available at: https://www.lsuhsc.edu/newsroom/LSU%20Health%20New%20Orleans%20and%20Partners%20Host%20Event%20to%20Improve%20Mental%20Health%20After%20Disasters.html

- August 2019 ENCORES Final Conference notification – "LSU Health New Orleans to Co-Host Free Community Conference on Disaster-Related Mental Health," LSU Health New Orleans Newsroom. Available at: https://www.lsuhsc.edu/newsroom/LSU%20Health%20New%20Orleans%20to%20Co-Host%20Free%20Community%20Conference%20on%20Disaster-Related%20Mental%20Health.html

- Announcement of Palinkas et al 2021 publication – "Study Identifies Strengths and Challenges of Responding to Dual Disasters". LSU Health New Orleans Newsroom. Available at https://www.lsuhsc.edu/newsroom/Study%20Identifies%20Strengths%20and%20Challenges%20of%20Responding%20to%20Dual%20Disasters.html

Social Media accounts: https://www.facebook.com/C-Learn-Community-Resilience-Learning-Collaborativeand-Research-Network

Websites: www.c-learn.org