

atlas: An Interactive Text Messaging Program Combining Weather Alerts With
Hyper-Localized Resources & Actionable Insights for Addressing Climate Change

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Objective:

The purpose of this research is to develop and establish the feasibility and potential impact of the *atlas* in a 30-day pilot test. This interactive text messaging program leverages insights from behavior change science and integrates data from the National Weather Service to engage a broad spectrum of users with varying levels of concern about climate change and tailor the user experience.

Design:

As this is a Phase I study, it utilizes a single group, pre-post pilot test of the *atlas* program.

The *atlas* text messaging program has various components:

- providing information on current climate-related and environmental risks (e.g., high temperatures, air quality alerts, asthma triggers etc.) that might adversely affect a user's current health conditions;
- linking users to local zip-code matched resources to mitigate their specific risk (e.g., cooling centers, hurricane shelters)
- implementing a full range of best practices in tailored health behavior change communications to personalize ongoing communications regarding the link between human actions and extreme weather based on the user's level of concern about and belief in climate change;
- providing customized actionable tips for addressing climate change to promote climate efficacy at the individual, community, and policy/advocacy level based on the user's level of motivation.

Methods:

The protocol involves a 30-day pilot test. The initial onboarding assessment (Session 1) begins with a brief screener that assesses age, level of concern about extreme weather, level of certainty that climate change is happening now, and extent to which users believe climate change is caused by human actions.

Individuals under 18 years old and/or those who respond "not at all" to the screening questions will be excluded from the study with an option to explore helpful resources around climate change and extreme weather.

All other users will be invited to provide informed consent to participate in the 30-day pilot test. Users who provide informed consent continue in Session 1, which includes:

- A 3-item measure of response efficacy that assessed individual, community, and governmental/policy level efficacy
- A question about frequency of taking action on climate change in the past year
- A question about confidence for taking action in the next month
- Individually tailored feedback on all questions
- A brief demographic assessment

All *atlas* users are opted into text messages that are activated by an API call from any weather alerts issued by the National Weather Service. Resources and tips for protecting oneself from the specific type of extreme weather are matched to the severity of the alert (e.g., flood watch vs. flood warning) and regionalized (e.g., cooling centers and weatherization programs in the specific city in which participants reside).

Following Session 1, up to 30 days of daily tailored text messages are queued for each user. Thus, even if they do not respond to subsequent assessment questions, they continue to receive personalized text tips and weather alerts. Every seven days, *atlas* prompts users to respond to additional brief assessments that enable their feedback to be further customized.

Thirty days post-baseline, users are invited to complete an online follow-up assessment that re-asked all baseline (Session 1) questions, anxiety, norms, unmet social needs, and intention to take climate action, as well as asking what climate actions the user has taken in the past month and intends to take in the next month. Users are also asked to respond to an evaluation of *atlas* that includes 11 Likert-scale response as well as a series of open-ended questions about what they liked best and least about *atlas* and how it could be improved. Up to 5 emails and/or text reminders and 2 phone calls to complete the follow-up assessment are sent. Participants receive a \$35 gift card after they finish the first session of *atlas* and a \$40 gift card after they complete the final survey.