

Communicating Risk to Motivate Individual Action



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Project Goal: Apply the Transtheoretical Model (TTM) to develop and test computer tailored interventions (CTIs) via text messaging designed to facilitate and accelerate coastal residents (NE and SE) through the stages of change to take action to prepare for and mitigate impacts of coastal storms.

Our program delivers computer-tailored interventions (CTI)

- Matched to stage of change
- Pros and Cons of changing
- And other TTM constructs



The FEMA/ American Red Cross goal for effective preparedness was used in this project:

Be Red Cross Ready



- ✓ Get a kit
- ✓ Make a plan
- ✓ Be informed



Review of Year 4 Pilot Study

3,043 participants from 3 New England states & 2 Southeast Gulf States

RESULTS BY REGION

| | | New England (n= 860) | | South East (n= 2,177) | | X ² | p |
|----------------------------------|------------------|-------------------------|------|--------------------------|------|----------------|-------|
| | | n | % | n | % | | |
| Baseline Stage – Disaster | Precontemplation | 164 | 19.1 | 187 | 8.6 | 140.39 | <.001 |
| | Contemplation | 213 | 24.8 | 332 | 15.3 | | |
| | Preparation | 206 | 24 | 541 | 24.9 | | |
| | Action | 145 | 16.9 | 636 | 29.2 | | |
| | Maintenance | 132 | 15.3 | 481 | 22.1 | | |

| | New England (n=860) | South East (n=2,177) | Total |
|---------------------------|------------------------|-------------------------|-------|
| % at risk who took action | 17.0% | 47.8% | 38.0% |

- We predicted the SE would outperform the NE population and it did, 2.8 X greater
- 38% of participants had become prepared during the 10 months of the trial
- The 38% overall % is identical to what we found the first time we treated 15 different risk behaviors
- We predicted that our tailored intervention would produce results at least 10 times greater than the national secular trends of 2% action taken per year. Our results were 19 times greater than the secular trends

Research Activity Since Last Annual Meeting



CVS Health

In-person meetings with member of CVS's corporate team based in Woonsocket, RI

- National chain healthcare organization selected
- 4.5 Million customers per day – Largest pharmacy health care provider in the U.S. - ROI very high – Able to incentivize
- A very enthusiastic response to the idea of using our CTI with their 300,000 employees
- We will reach out to them again to see if they would make our program available to the 4,500,000 customers they serve each day - their CTI would include med preparedness (3 month supply) that we would develop
- Decision not to engage in our trial due to internal transitions which made it an inopportune time
 - Merger/Reorganization with Aetna
 - Hurricane Dorian (cat 5) Aug. 28th -Sep. 10th
- They are very open to revisiting future options for engagement



Year 5 End-User Engagement Demonstration Project



Rhode Island Department of Health

Healthcare Coalition of Rhode Island & Hospital Association of Rhode Island

9 of 14 RI Hospitals

6 other types of health-related organizations

Community/Neighborhood Organization - Common Fence Point, Portsmouth, RI

RI Center for Emergency Preparation and Response & Hospital Coalition of Rhode Island

Year 5 Activities, findings, and outcomes for remainder of project

End-User Engagement To Date



Rhode Island Department of Health Demonstration Trial

Funded to serve: 700

Rolling Baseline: 491

60% opted in to receiving text messages

3M Follow-up: around 30%

Higher opting in rates & follow-up rates

then our previous trial *and* many large grant funded studies published in high impact journals

Year 5 Research activities, findings and outcomes to date

FEMA Region One Meeting



FEMA

Presentation given to the following members of the Region One Team:

- Federal Preparedness Coordinator
- Preparedness Branch Chief
- FEMA Integration Team Lead
- Community Preparedness Officer
- Regional Preparedness Liaison

High interest for our program and adding adaptations and innovations such as medicine preparedness and financial preparedness

Year 5 Research activities, findings and outcomes to date



FEMA National

- A series of face-to-face and telephone meetings - collaboration is ongoing with shared data, model and/or messages
- On-site and telephone meetings led by first, then and now by
- Consulted with DHS Misinformation Initiative to have their communications stage matched
- Utilization of TTM Stages of Change & CTIs for messaging
- Included our staging measures and algorithms in FEMA's National Household Survey

Research Activity Since Last Annual Meeting

Rhode Island Flood Mitigation Annual Conference



- Participants invited to share their agency/organization's successes/barriers encountered when implementing outreach strategies - concluded with suggestions regarding next steps for positive outcomes, one being our CTI program.

Rhode Island Emergency Management Agency

Presentation to Director Mark Pappas & members of the administrative staff

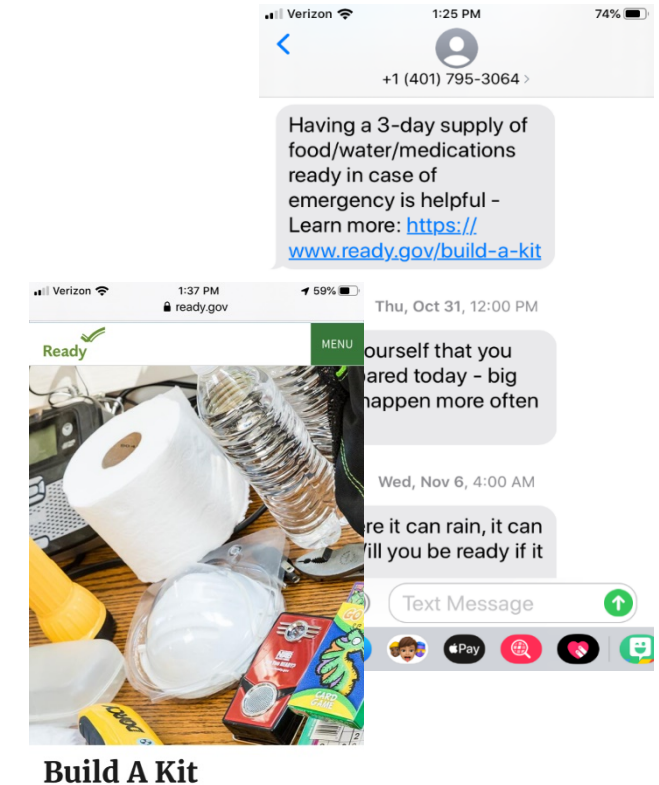
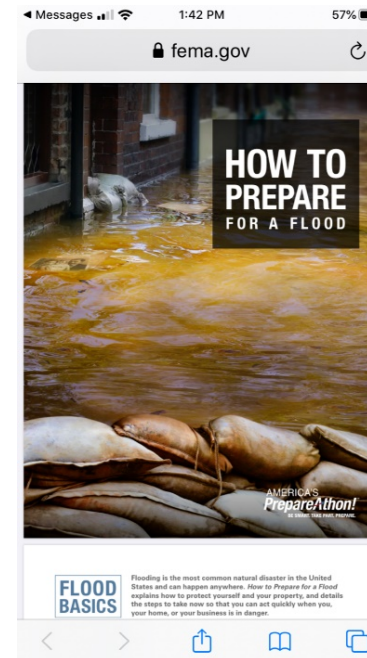
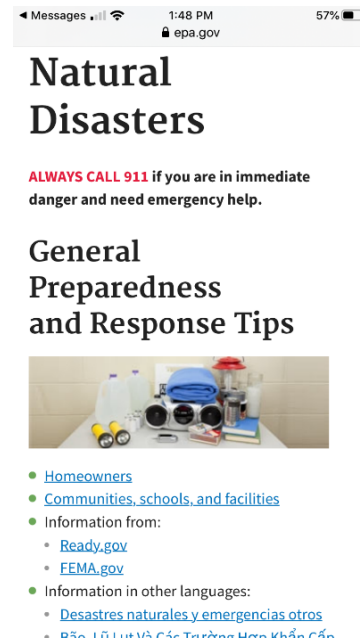
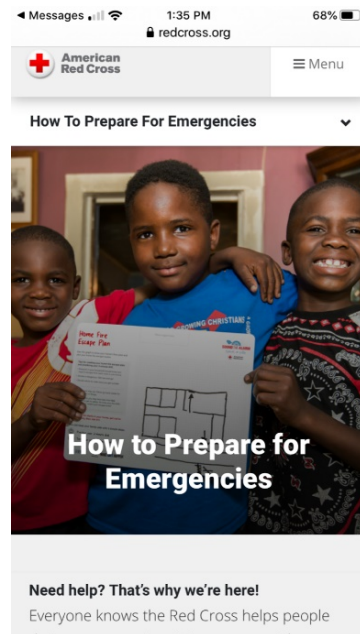
- Rhode Island representative for FEMA
- High enthusiasm from all members with unanimous agreement that the program would be a good fit
- FEMA representative Ryan Jones requested we present to the regional team in Boston



Year 5 Research activities, findings and outcomes to date

Refine Existing Text Messaging Component

- Staging, frequency and functionality of links



Year 5 Research activities, findings and outcomes to date

Production of a Promotional Video



- Elicits consciousness raising effect for those in Precontemplation and Contemplation
- Provides information regarding the intervention tool and it's effectiveness, no matter what stage they are in!
- The video was shown at the R.I. Department of Health meeting which led to our on-going demonstration trial.

Link to Video if time permits: Learn more about this program: [Watch Video](#)

Transition of our project's outcomes

From Enthusiasm to Commitment: Strengths & Weaknesses

Strengths

- Entities - all levels, municipal, state & federal and private organizations – Organizations engaged in preparedness of public and employees report their need for innovations such as our digital CTI
 - Positive Response from such organizations (unparalleled in my 19 year recruitment history)
 - Timeliness of its content reflected in part by environmental disasters becoming political priorities
 - Research of interventions based on leading theory of behavior change
 - Ease of digital dissemination via cellphone or computer
 - Innovations such as medication and financial preparedness
- Adoption of program by end-user organizations for dissemination to individuals has been promising based upon recruitment thus far

Transition of our project's outcomes

From Enthusiasm to Commitment: Strengths & Weaknesses

Weaknesses: Barriers to Dissemination

- Engaging high percentages of individuals is the biggest challenge for all programs designed to reduce health risk behaviors
- Further identification is needed to determine the gap in transfer of recruitment opportunity from end-user organizations to individuals in the organization
- Strategies to address such issues and allow for a more streamlined dissemination are available and we are pursuing opportunities to apply them e.g. with CVS Health