

Communicating Risk to Motivate Individual Action

James O. Prochaska, Ph.D., CPRC, University of Rhode Island

Andrea L. Paiva, Ph.D., CPRC, University of Rhode Island

Pam Rubinoff, Coastal Extension Specialist, CRC, University of Rhode Island

Janet L. Johnson, Ph.D., Pro-Change Behavior Systems

Norbert Mundorf, Ph.D., Communications, University of Rhode Island

Colleen A. Redding, Ph.D., CPRC, University of Rhode Island

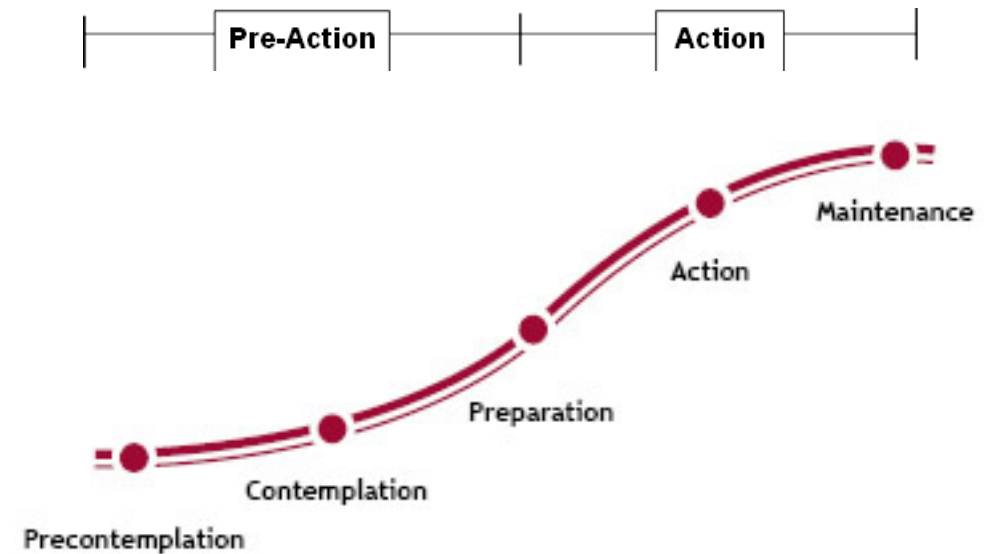
CRC 1st Annual Meeting: March 2-3, 2016
Chapel Hill, NC

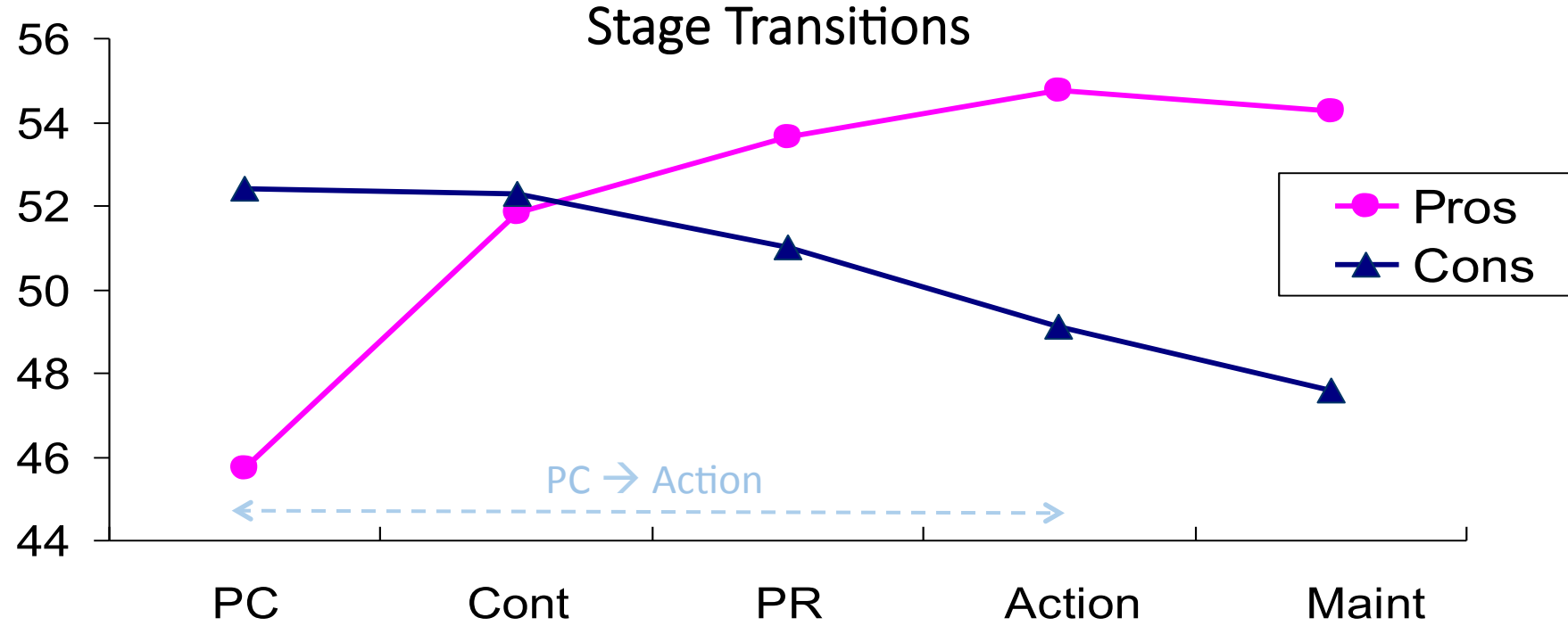
Project Goal: Apply the Transtheoretical Model (TTM) to develop and test computer tailored interventions (CTIs) via text messaging designed to facilitate and accelerate coastal residents (NE and FL) through the stages of change to take action to prepare for and mitigate impacts of coastal storms.

Relevance to Homeland Security

Relevance to Homeland Security. This research will strengthen national preparedness and improve the resilience of coastal communities in the face of coastal storm hazards.

- Coastal residents who are not ready or do not see the benefits of becoming prepared will be hit the hardest and will eventually cost the most money.
- By engaging the entire population, we are able to make larger impacts on the community and conform to the core guiding principles of the DHS Whole Community Approach:
 1. understand and meet the needs of the Whole Community
 2. engage and empower all of the community
 3. strengthen what works well in communities on a daily basis.





The pros and cons of changing across stages of change from PC to Action

Hall, K. L. & Rossi, J. S. (2008). Meta-analytic examination of the strong and weak principles across 48 health behaviors. *Preventive Medicine*, 46, 266-274.

	48 behaviors	Preparedness
Pros	↑ 1.00 S.D.	↑ .92 S.D.
Cons	↓ .54 S.D.	↓ .49 S.D.

Intervention Targeting and Tailoring

One Size Fits All



Intervention Targeting and Tailoring

One Size Fits All



Stage of Change

Targeted (Stage-Matched)



Intervention Targeting and Tailoring

One Size Fits All



Stage of Change

Targeted (Stage-Matched)



Pros & Cons

Self-Efficacy

Processes

Tailored (Individualized)



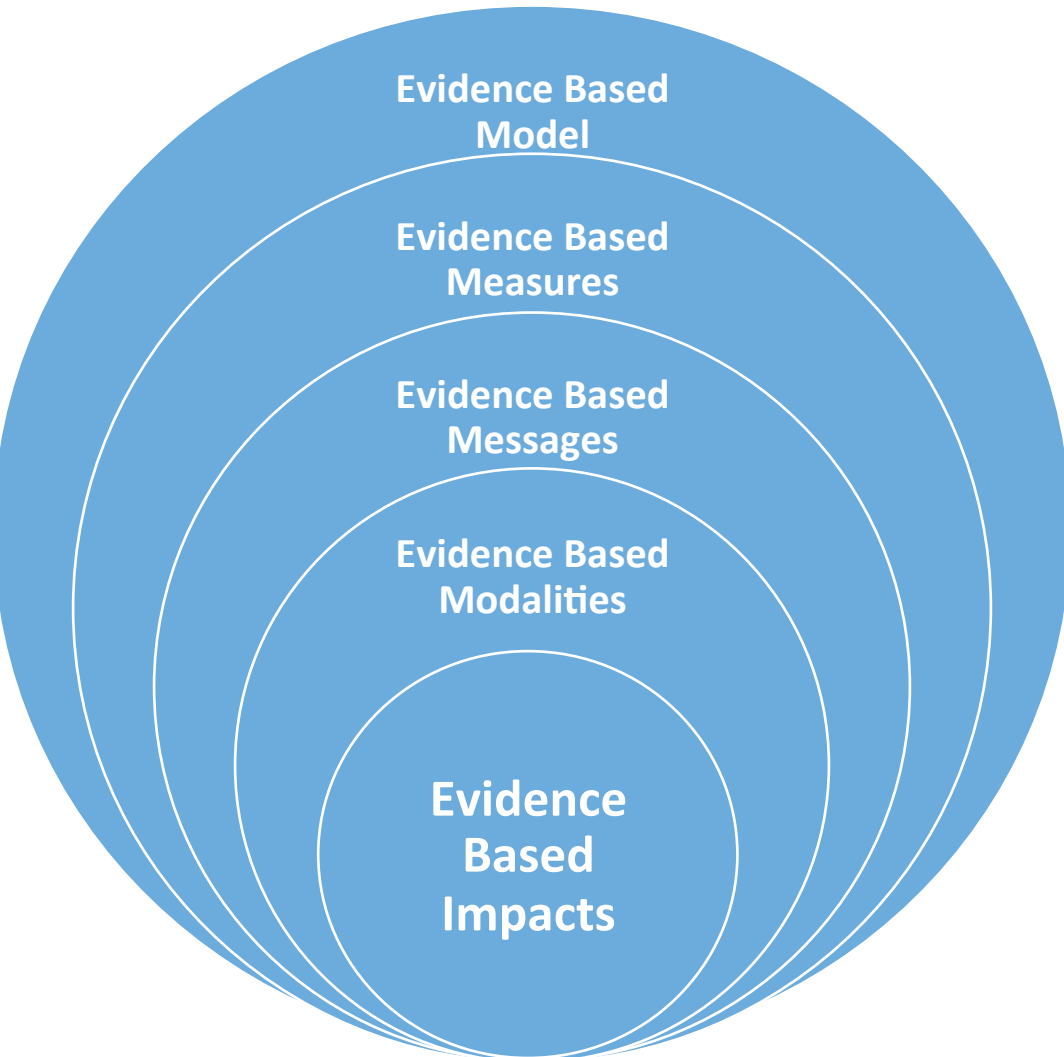
Technical Approach

Key Activities and Milestones

- Update/customize Internet CTI; develop statistical decision rules; create TTM-based text messages; test and complete for dissemination (Year 1)
- Recruit and deliver to 1000 coastal residents (FL/NE); analyze baseline; Deliver Internet CTI/text messaging tailored to stage; analyze 12 month outcomes (Year 2)

Technical Activities and Milestones – 1/1/2016 to 12/31/2017

Research Activity	Start/Completion
Update/customize Internet CTI; Develop statistical decision rules for text-based CTIs.	1/1/16 - 6/30/16
Create TIM-based text messages; Program and test text system.	7/1/16 – 12/31/16
Recruit census-based sample of 1,000 coastal residents (NE and FL)	7/1/16 –6/30/16
Complete updated CTI system, including text messages, ready to disseminate.	7/1/16 –12/31/16
Analyze and report baseline data on 1,000 coastal residents recruited into the study.	7/1/16 –6/30/17
Deliver Internet CTI and first 12 months of text messaging with frequency tailored to stage.	7/1/17 –12/31/17
Analyze and report data on 12 month outcomes of 1,000 coastal residents recruited into the study.	7/1/17 –12/31/17



Results

1. Tailored intervention with texting component included
2. Outcomes of the intervention:
 - Intervention group will be taking action on preparedness more than the control group (Interventions 2x+ > Control)
 - Participants who have not yet taken action will be progressing through the stages on:
 - a. Preparedness
 - b. Reducing Risks from Wind
 - c. Reducing Risks from Floods
3. Explore progress from Suffering/Struggling to Thriving
4. High Impact Innovations ready for dissemination

Translation Activities and End Users

- **While the 1,000 participants in the research are the direct end users who will receive the interventions, it is the local, state, and federal emergency managers and coastal planners who will benefit from a transition program to use the research, tools and its findings in the future.**
- **A series of presentations and discussions will be coordinated by the FEMA's Individual and Community Preparedness Division (J. Snelling). The first presentation will focus on applying the Transtheoretical Model's measures, messages, and communication modalities to disaster preparedness. A broad group of invited stakeholders will participate in the discussion.**
- **The second smaller session will be more focused on our current project and the potential for it to contribute to FEMA's Preparedness in America Project.**
- **The third session will focus on FEMA's Preparedness research and how our TTM model could contribute to FEMA's surveys and future research strategies. Meetings with multiple stakeholders.**

CRC Project Integration

An Integrated Internship is being developed by members of the three projects at URI. This Internship will integrate:

- Basic research: Modeling the impact of potential hurricanes in Rhode Island and the Northeast region.**
- Community level research: Barriers to effective action and policies to enhance community resilience.**
- Individual and population level research: Interventions to increase preparedness for severe storm disasters.**

CRC Project Integration

- **Peer interaction with interns in broader programs related to areas like climate change impacts and risk adaptation and mitigation.**
- **PI and project members are available for presenting guest lectures for educational partner universities. Example: Pam Rubinoff is scheduled to present as guest lecturer for the UNC Natural Hazards Resilience Speaker Series Seminar. This session will focus on the translation of research findings, hazards modeling, and policy to practice in high-risk coastal communities.**

Preparedness in America

Research Insights to Increase Individual, Organizational, and Community Action

Updated: August 2014



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