

The Message Design Dashboard: A Tool for Effective Alert and Warning Design

Jeannette Sutton, Micki Olson, and Lauren B. Cain

College of Emergency Preparedness, Homeland Security, and Cybersecurity; University at Albany



PROJECT OBJECTIVES

Design, develop, validate, and implement the Message Design Dashboard (MDD), a template-based software tool to help Alerting Authorities quickly write effective and complete Wireless Emergency Alerts (WEAs).

MDD Content and Validation

- Developed the **Warning Lexicon**— content for **48 hazards**, including **impact statements** and **protective actions**
- Verified by hazard and warning message design subject matter experts
- Workflow designed to follow Mileti and Sorensen's (1990) **Warning Response Model**
- Validated standardized contents in an **experimental survey** testing **MDD messages** against **complete and incomplete standard of practice messages (SOP)**

Understanding

MDD messages increased understanding over both SOP messages

Belief

MDD messages increased belief over both SOP messages

Self-efficacy

MDD and complete SOP messages increased self-efficacy over incomplete SOP messages

MDD Interface

360-Character WEA Creation

What is the threat, hazard, or event that is leading to this alert/warning being issued?

Select appropriate hazard using drop-down or start typing in search box.

Select the timing of the hazard.

Wildfire

Toxic Fumes

Tsunami

Volcano

Water Service Disruption

Wildfire

Winter Storm

NOTE: Select "About to Happen" if the hazard has not happened yet but will soon. Select "Happening/Happened" if the hazard has already happened or is currently happening. **Timing only affects 360 char WEAs.**

360 Char WEA Preview:

Albany County Fire: [WILDFIRE WARNING], [Level 1 Level 2, Level 3], [Ready Set Go], [Mandatory/Voluntary Evacuation] in [location]. Visibility in area will be reduced and roads/evacuation routes can become blocked; if you do not leave now, you could be trapped, injured, or killed.

283 of 360 Characters Used

Next Step →

Training Content

Socio-behavioral model of warning response and message design fundamentals

Overview of MDD functions and hands-on training

Scenario-based message design activities pre-, during- and post-training

Training Impact

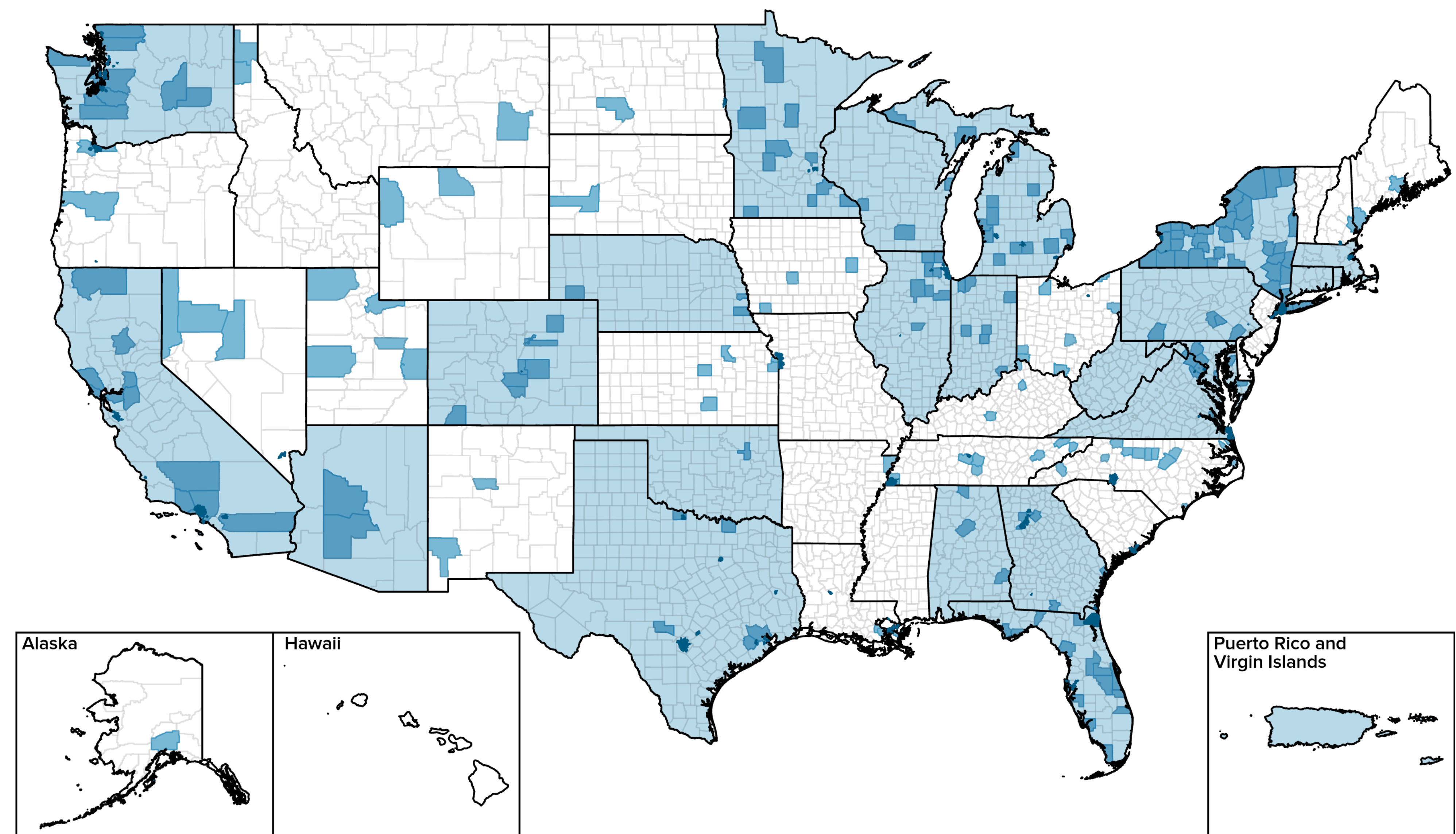
11 deliveries

666 participants

49 states + Washington, D.C.

2 territories

76% of Americans served by trained Alerting Authorities



Next Steps

- Finalize "MDD 2.0" prototype with improvements to user interface based on evaluation feedback
- Analyze training data— message proficiency pre-, during-, and post-training
- Official software launch via FEMA's Alerting Tools Portal
- **Additional research:**
 - All-clear messaging
 - Missing persons alerts
 - Symbols and icons

Resources



Warning Lexicon Paper



Decade of WEAs Paper



MDD Training



The Warn Room