

Show Me: A Communication Tool for Emergency Shelters

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Project Background

- Ability to communicate is paramount during disasters
- Very real need to be able to provide information to and gather information from victims
- Ineffective communication can raise levels of stress and hinder response operations
 - This is especially true when health and safety personnel are interacting with individuals with communication challenges

Project Goal

- To develop a Universal Disaster Communication Tool that will better assist individuals with access and functional needs (IAFN), and first responders and first receivers communicate during and immediately after an emergency

Target Populations

- People with cognitive disabilities
- People who are deaf or hard of hearing
- People with limited English proficiency
- Anyone who might struggle to communicate verbally during an emergency

Final Product

- ***Show Me: A Communication Tool for Emergency Shelters***
 - Simple, hands-on tool
 - Used within a community shelter setting by professional staff and volunteers, and individuals with communication challenges
 - Reduces communications barriers so individuals can make their needs and concerns understood

Methodology

- Project was divided into three distinct phases
 - Phase One – Initial discovery and research
 - Phase Two – Focus groups
 - Phase Three – Develop prototypes and conduct user testing

Phase One – Initial discovery and research

- Literature Review
 - Examined relevant literature published in past ten years
 - Focus on emergency preparedness and the specific needs of IAFN
 - Effective ways to address those needs
 - Implementation and evaluation of emergency communication tools

Phase One (continued)

- Environmental Scan
 - What tools already exist and may be used by people with communication limitations
 - What pictograms/infographics currently are used in health or disaster settings
 - What resources/devices are available to first responders working with IAFN

Phase One (continued)

● I AM

short of breath	in pain	choking	feeling sick
hungry/thirsty	cold/hot	tired	dizzy
angry	afraid	frustrated	sad

● I WANT

to be suctioned	lip moistened	water	to be comforted	to sleep
tv/video/dvd	call light /remote	it quiet	lights off/on	to go home
to sit up	to lie down	to turn left/right	head of bed up/down	get out of bed

● I WANT TO SEE

doctor	nurse	family	chaplain
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no yes STOP pen/paper

A B C D E F G H I 1 2 3 Thank You
J K L M N O P Q R 4 5 6 I Love You
S T U V W X Y Z . 7 8 9
 ' , ? ! SPACE + 0 -

For infection control purposes, please do not reuse this board between patients.

VIDATAK EZ BOARD

Yes Sí	No No	Up Arriba	Down Abajo
Cold Frio	Hot Caliente	Wet Mojado	Pet Animal Doméstico
Happy Cortado	Sad Triste	Angry Enojado	Afraid Tener Miedo
Confused Confuso	Mother Madre	Father Padre	Sister/Brother Hermana/o
Child/Baby Niño/Bebe	Care Giver Asistente	Oxygen Oxígeno	Cane Bastón
Wheelchair Silla De Ruedas	Eyeglasses Gafas/Especiales	Battery Bateria	

Phase One (continued)

- In-depth interviews
 - Representatives from key IAFN advocacy organizations and SMEs
 - Access Umbrella
 - Ceconi Consulting Group
 - Disability Policy Consortium
 - Lowell General Hospital
 - Mattapoissett Police Department
 - Northampton Health Department
 - Shriver Center at UMASS Medical School
 - Stavros Center for Independent Living

Phase Two - Focus Groups

- 5 focus groups of 5-7 participants held in diverse communities across the Commonwealth
 - People with limited English proficiency (LEP)
 - People with disabilities
 - Older adults
 - First responders/receivers
 - Public health professionals

Phase Two (continued)

- Discussion topics:
 - Participants' experiences communicating with health professionals or IAFN
 - What they currently do to communicate with health professionals or IAFN
 - The barriers in using communication tools
 - What features would make a tool easier or harder to use

Phase Two (continued)

- Key Findings
 - Every emergency situation is different and content of tool should depend on setting
 - Simplicity, clarity, setting, and action are most important communication factors during an emergency
 - Paper system is useful but a tool on a smartphone, tablet, or laptop would be desirable as well

Phase Three

- Prototype Development and User Testing
 - Focus on design and functionality
 - Questions to be answered included:
 - Can participants successfully use the prototypes?
 - How satisfied are they with the process?
 - What are users' initial reaction to the icon set?

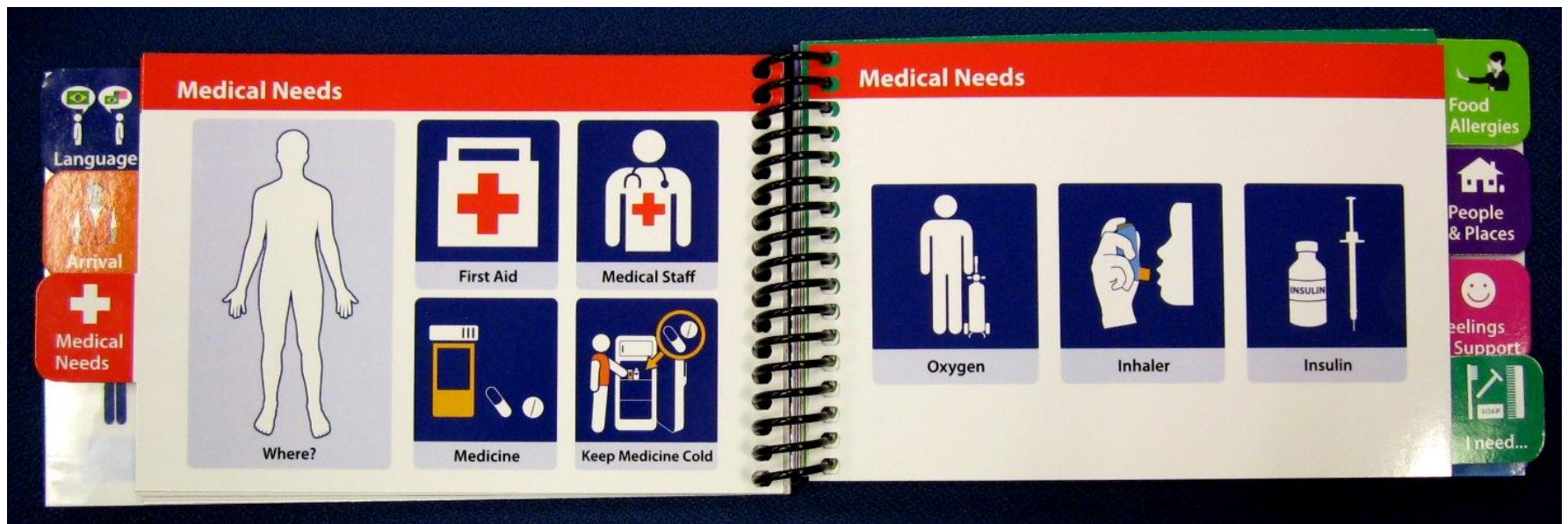
Phase Three (continued)

- Types of user testing
 - Focus groups
 - Informal interviews
 - One-on-one usability testing
 - Dyadic usability tests

Final Product



Final Product (continued)



Distribution Plan

- Direct mailing or in-person outreach
 - Local public health authorities
 - Local emergency management directors
 - MRC units
 - Behavioral Health Disaster Responders
 - Massachusetts Office on Disability
 - Massachusetts Disaster Medical Assistance Teams

The Future of *Show Me*

- Mobile application
 - Compatible with smartphones and tablets (Apple and Android products)
 - Customizable not just for shelters but also emergency dispensing sites (EDS) and door-to-door outreach required for shelter-in-place or evacuation directives

Mobile Application

- In-depth interviews conducted
 - Goals
 - Understand communication needs of individuals with access and functional needs
 - Understand preferences of first responders
 - Inform icon development
 - Identify important messages that each group wants to communicate in an emergency
 - Identify messages for shelter in place and evacuation scenarios
 - Identify priority functions of a mobile app in emergency settings

Mobile Application

- Interviewees included
 - One emergency management director
 - Two public health professionals
 - One first responder
 - One advocate for individuals with deafness/hearing impairments
 - Two advocates for individuals with limited English proficiency
 - One advocate for individuals with cognitive delays

Mobile Application

- Recent activities
 - Finalizing initial round of icons/messages
 - Conducting six usability sessions
 - Limited English proficiency (2)
 - Individuals with cognitive disabilities (2)
 - Individuals who are deaf/hard of hearing (2)
 - Starting ~10/15, ending mid November
 - Can IAFN understand and use the messages in this initial icon set?
 - How can icons be presented (size, color, layout, etc.) so that they are helpful with IAFN?
 - Which icons should be grouped together and how should each group be labeled?
 - What mobile and tablet apps are individuals currently using and what do they like about them?

Mobile Application

- Next steps
 - Revisions will be made to icons and messaging
 - Suggestions for the design, organization and presentation of icons for the app will be applied based on feedback from usability sessions
 - The vendor currently is working on creating the logic for navigating through the app
 - Application prototype will be created

Mobile Application

- Three usability tests conducted on prototype
 - Sessions either will be with IAFN or dyads, which are a combination of professionals paired with IAFN sitting down together and using the tool to complete some communication tasks
 - Further revisions to icons/messaging/app based on results of usability testing
 - Dyadic testing during the beta testing of the app
 - Delivery of final app and training recommendations

Thank you!

Questions or Comments?

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